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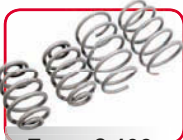
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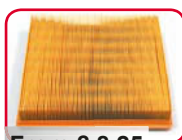
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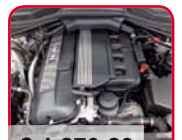
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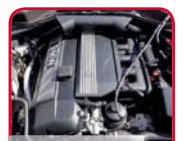
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Car no.: 1765



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Car no.: 1754



BMW X5 (E53) SAV 3.0D 2004
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FIRST WORDS

I was talking with a friend recently about the 540i and potential power upgrades, to which he replied 'why not just buy an M5?'. This was, of course, the wrong answer. It was the sensible answer, perhaps, but not the right one. When it comes to modifying, it's rarely a justifiable or quantifiable exercise – it's not about doing what makes the most sense, it's about doing what you want to do purely for the reason that you want to do it. If we took a step back, added up what we'd spent on our cars and figured out what we could have bought instead, it would certainly be eye-opening but I don't want to say that it would make for sobering reading. If you want to buy a BMW and modify it, that's what you're going to do; you're not going to go out and buy a bone stock whatever and roll around in that instead. It's not a case of either or when it comes to modifying, it's almost always a case of planning out the project you want to build, spending time thinking about what you're going to buy and what you want to do and committing to that idea. To the outside world, modifying must seem like madness but for us, it's a way of life.

So, to this issue then, and your monthly fix of that modified BMW lifestyle. Our cover car goes hard and it is an incredible machine – the RHD conversion on an E30 M3 might

raise a few eyebrows (read the feature, p22, it explains it all) and the S54 swap and supercharger certainly won't bring them back down to earth. With 600hp on tap it's an absolute beast of an E30 and one of the finest examples we've come across. You're going to enjoy this.

If you're a power freak, head over to p42 to read about a fierce 800whp Z3 M Roadster and we've got a bonkers 2JZ-swapped E46 M3 as well. Speaking of

swaps, be sure to cast your peepers over CATuned's lush Henna E30 packing an S50 punch and a mild-mannered E28 525e, suitably enhanced with the addition of an S38B36 lump. We've also driven the face-lifted M135i and M6 Convertible (they're both very good, in case you were wondering...) and we've got show reports and a whole lot more good stuff for you.

Elizabeth de Latour, Editor



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Where Time Attack is concerned it's pretty much a case of anything goes, and this S65 V8 1 Series is quite the beast.

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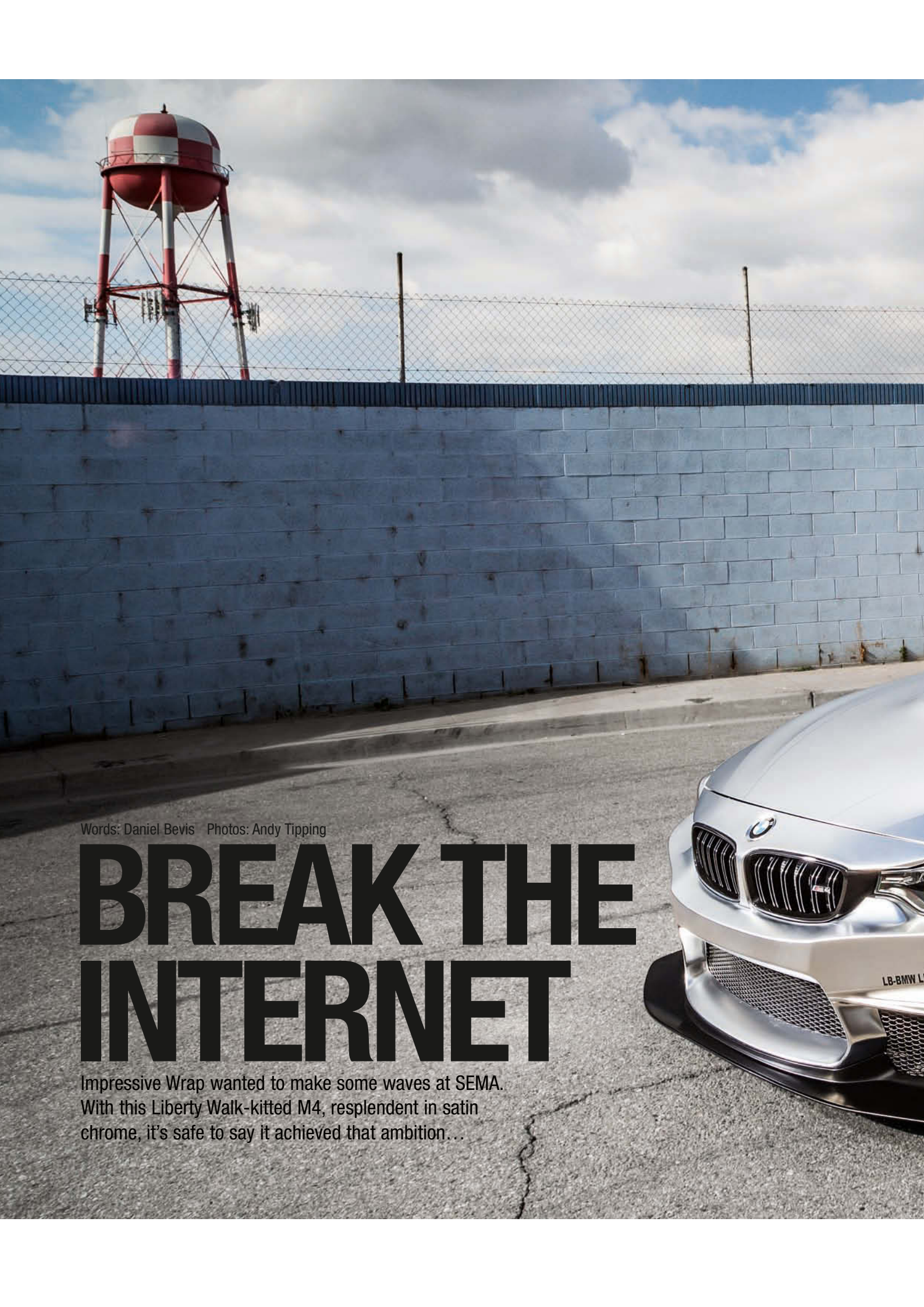
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A silver BMW M4 with a Liberty Walk kit is parked on a paved surface. In the background, there is a tall, grey concrete wall topped with a chain-link fence. Behind the wall, a red and white striped water tower is visible against a blue sky with scattered clouds. The car is positioned on the right side of the frame, showing its front end and headlights. The license plate area has the text 'LB-BMW L'.

Words: Daniel Bevis Photos: Andy Tipping

BREAK THE INTERNET

Impressive Wrap wanted to make some waves at SEMA. With this Liberty Walk-kitted M4, resplendent in satin chrome, it's safe to say it achieved that ambition...



I thought it would be a great opportunity
to get a spotlight
at SEMA for advertising the shop



LB kit is wide, and then some. 12x20" Savini wheels fill out the massive rear arches



There are certain acronyms that have passed into the everyday lexicon so seamlessly that they're just words; we don't consider what they stand for, as they stand alone. And we're not talking about such johnny-come-lately fare as LOL, OMG and IDK – terms like DIY, AWOL and ASAP are the sort of things we say all the time without considering that they're short for something longer-form. (Well, some people do, but they're the kind of pedants that'd point out that it's only an acronym if it becomes a pronounceable word, and that terms like DIY are actually initialisms. But these people are dull, and end up standing alone in the corner at parties.)

SEMA is one such acronym. If you have even a micron of unleaded swirling around your bloodstream – and you're reading this now, so we know that you do – you'll be familiar with the annual extravaganza of the SEMA show: a glimmering Las Vegas industry get-together that acts to show off the most extreme and outrageous new custom car builds along with highlighting the latest trends in the areas of wheels, body addenda, colours, materials, brands, you name it. If it's so-hot-right-now, it's at SEMA. The acronym stands for Specialty Equipment Market Association, an organisation that was formed back in 1963 by such hallowed luminaries as Dean Moon (of Mooneyes), Vic Edelbrock Jr (of

Edelbrock, obviously), Roy Richter (of Bell Helmets and Cragar Equipment), and various other leading lights of the trade; it now encompasses well over 6000 companies in the performance and aftermarket arena, offering business development, market research, training and development, and all sorts of stuff like that. They also put on one hell of a show...

The first SEMA show took place in 1967, in the basement of the Dodger Stadium in Los Angeles, and it's been growing in stature ever since. Today, if you're not at SEMA, you're not playing the game. We've featured a number of cars over the years that were built specifically for the show, and this one is arguably one of the most eye-catching. Impressive Wrap's Liberty Walk-kitted M4 is badass on a Kim Kardashian 'break the internet' scale: shiny, bootylicious, and just downright dirty.

"This was our build for SEMA 2014," says Impressive Wrap's Michael Lee, by way of introduction. "It all started when we decided at the last minute to get an M4 as our shop car for SEMA, and the show was only a week away. We trade work with LTMW here and there, and we were busy wrapping a Rocket Bunny BRZ from LTMW when the guys told us that one of their customers had backed out on a 4 Series Liberty Walk kit. I thought it would be a great opportunity to get a spotlight at SEMA for advertising the shop, so I hopped on it and told them we wanted the kit for our M4!"

LT Motorwerks is also based in El Monte, California, which makes these exchanges of trade so amenable, and it's an expert in pulling together cutting-edge BMW builds with up-to-the-minute styling trends. It also helps that it has strong links with the Japanese tuner scene, hence its ability to procure such exotic fare as the bold new Liberty Walk wide-body kit for the box-fresh M4. "Well, the kit it had wasn't actually for an M4, it was for a regular 4 Series, so it needed a bit of modifying," Michael explains, baulking slightly at the memory. "We dropped the M4 over to the guys that same day, and it took them around a week to get the kit fitted perfectly." As we know from featuring a number of LTMW builds, this won't be a case of the guys there dragging their heels – they'll have been pulling ridiculous hours to ensure that everything was fitting right and looking sharp. And when you've got SEMA in your sights, that's just the sort of tenacity and diligence that you're looking for: the world is watching, and these show builds live or die by social shareability. The slightest flaw will be captured by countless lenses and harshly judged by an ever-more frenzied shark pool of smartphone-toting commentators. So, thankfully, this M4 doesn't have that problem. As is LTMW's MO, the thing is flawless.

"Long Tran from the shop agreed to sponsor the labour of the build, and the car came back to us on the Wednesday night, ready for us to start wrapping on Thursday

morning,” Michael recalls. “Although at that point we also needed to get the suspension and the exhaust fitted, which left us with just a couple of days before the show...” Hey, there’s no pressure like deadline pressure, right?

These mods were essential, of course, as you can’t throw a wild and lairy body kit onto a standard car and then just leave everything as is. It just wouldn’t work. The arch gaps would be crazy, for a start. So a set of KW coilovers has been deployed in order to bring the broadened form closer to the Tarmac, getting the thing tightly hunkered down to accentuate that angry face. The exhaust – a full GTHAUS Meisterschaft system – was a no-brainer too, as SEMA isn’t just a static affair; sure, the car will be sitting on a stand for the bulk of the time, but people will see the thing arriving, and they’ll definitely see it leave. While the M4’s standard mechanical setup is certainly nothing to be sniffed at – that S55 motor growls to the force-induced tune of 431hp – it needs to sound outrageous if people are going to notice it among the maelstrom of hot metal under the Vegas sun. GTHAUS’s system for the M4 offers EV Control, meaning that it can be switched from mousey-quiet to shouty-loud at the flick of a switch, using clever internal valves. Suffice it to say, the latter was the order of the day for the hordes of phone-snapping crowds.

It’s a truism to say that a modern project car is made or broken by the choice of rolling stock, and this is where another sponsor sidles in from stage left, eager to infuse a little more mischief into the recipe. Savini Wheels stepped up to the plate, providing a set of forged SV61-C rims in a 20” diameter, with the rears being a striking 12” across. The design of these wheels is frankly mind-warping, as it takes your eyes a little while to figure out just what’s going on with the spokes – you end up gawping at them like a colourblind kid with a Magic Eye book. (Top tip: look at the spokes in groups of four, it makes it easier...) The brushed detailing on the edges of the satin black spokes really pulls you in, and you need to be careful you don’t get stuck, as there’s a hell of a lot of dish going on, too. It really is an outstanding setup.

Now, with such an in-your-face treatment of both bodywork and wheel choice, Impressive Wrap knew they had to do something really special, really unusual and alluring, to accentuate the sterling work that the M4 had already received. It would have been easy enough to do what a lot of tuners would do, and slather it in a loud shade that’d catch the eye from the other side of a conference hall; lime green, fluorescent yellow, something of that nature. But no, it opted for something rather more understated and, in doing so, has played a bit of a blinder; mixing a soupçon of

subtlety into the build has actually made the car all the more noteworthy, resplendent as it now is in a satin chrome finish. Shiny chrome is, naturally, a rather polarising effect – something you’d expect to see on a footballer’s Veyron – but satin chrome? That’s something a bit tasty. It echoes the brushed aluminium accents of the Savini rims, while offering a retro DeLorean-esque finish that both the young and young-at-heart will be able to relate to. And, of course, the advantage of a satin chrome vinyl wrap over a bare-metal DeLorean finish is that it won’t showcase a gallery of unfortunate fingerprints...

“There were long, hard hours put into the M4,” says Michael, “and a lot of last-minute preparations with stickers and tyre stencils, but we somehow managed to get everything done on time. This was all thanks to our partners and employees!” And what we find most impressive about this build is the ratio of time-to-effect: Impressive Wrap, let’s not forget, embarked upon this project just a week or so before the world’s biggest and most visible aftermarket tuner show. The expertise and dedication of LTMW, the vision of Savini’s design team, the engineering nous of GTHAUS, the bloody-minded lunacy of Liberty Walk and, above all, that inspired colour choice have all coalesced into something staggering. Stop the show. Silence the crowds. Break the internet. This is what SEMA builds are all about ●



DATA FILE

ENGINE & TRANSMISSION: S55B30 3.0-litre twin-turbo straight-six, GTHAUS Meisterschaft EV Control exhaust system, seven-speed M-DCT

CHASSIS: 10.5x20” (front) and 12x20” (rear) Savini SV61-C wheels (black with brushed accents) with 265/35 (front) and 295/30 (rear) Toyo Proxes 4 Plus tyres, KW coilovers

EXTERIOR: Satin chrome wrap, Liberty Walk wide-body kit (front splitter, rear diffuser, arch flares, boot spoiler), AeroFlow Dynamics carbon-fibre side skirts

INTERIOR: Stock M4 including ergonomic M seats, leather steering wheel and carbon-fibre trim

THANKS: Jackson Wong from Xsthetic Motorsports, Mike from Prestige Marketing, our sponsors LTMW, Savini and GTHAUS Meisterschaft, Stan from Toyo, Roger from AeroFlow

Engine is stock, but 431hp is more than enough to be getting on with; Meisterschaft exhaust sounds great and fills the rear valance



THORNEY MOTORSPORT ATLAS REMAP UNIT

New from Thorney Motorsport comes this handheld device that allow you to upload performance maps to your car without any stress or hassle. The Atlas (full of maps, you see) has been designed to replace the laptop in the ECU upgrading process – you simply plug the unit into your car, select your model of BMW, select the upgraded map you want, push a button and that's that, new map uploaded and away you go. You can also easily reverse the process if you ever want to go back to a standard map.

Thorney has over 16 years of BMW tuning experience, so remapping is something the company is very good at and the Atlas houses all of Thorney's custom maps, including race car maps and specific maps for mechanical upgrades. If you change your car you simply use your Atlas to put your old car back to standard and then, for a small renewal fee, you can put a performance map on your new car. There's no charge for the map and the unit can be used over and over again (only on one car a time, mind), making it exceptional value as well as being exceptionally easy to use.

Price: £499

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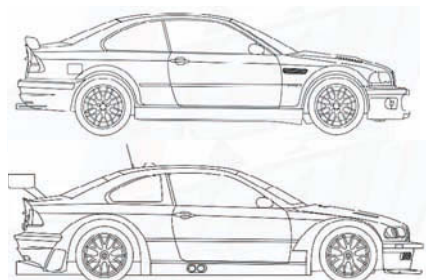


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Available now for a wide range of models including the 2 and 4 Series, these kidney grilles feature a dual slat design, just like the latest M cars, and are available in matt black, gloss black or genuine carbon.

Price: From £64.99 per pair

Web: www.ssdd-motorsport.com



M3 CUP RACE SERIES

There's a new race series in town, the M3 Cup, sponsored by Tegiwa, and you could be competing in this club level series when it launches in 2016.

The series will be run by the 750 Motor Club, whose reputation in organising successful and affordable single marque race series is second to none. It will be based around the E46 M3 with races to be held across the UK at circuits such as Silverstone, Brands Hatch and Donington. For as little as £11,000 plus the cost of an M3, you could be racing in 2016, or you could buy a race-ready Entry Spec racer for £19,000 or a Works-spec car for £20,000. It sounds like a seriously exciting race series and we can't wait to for next year.

Web: www.m3-cup.com

KW M4 CONVERTIBLE VARIANT 3 COILOVERS

German suspension guru KW has launched its high end V3 coilover kit for the F83 M4 Convertible. Already available for both M3 and M4 Coupé models, the V3 kit offers a huge range of adjustment options, allowing you to fine-tune your M4's handling with precision and perfection. The V3 coilovers allow for lowering between 15-40mm and also offer separately adjustable compression and rebound settings via two click wheels, with 12 and 16 clicks respectively.

Price: £1815

Web: www.kwsuspensions.co.uk



DIRENZA E9X M3 CAT-BACK EXHAUST

Now available is this rather sexy performance exhaust for the E90 and E92 M3s from Direnza.

Made from T304 stainless steel, the system uses 2.5" mandrel bent piping throughout for improved flow characteristics compared with the standard exhaust and is finished off by four 3" tailpipes. All necessary gaskets and bolts required for fitting are included and Direnza says the system will increase power and improve throttle response as well as delivering a more aggressive V8 soundtrack.

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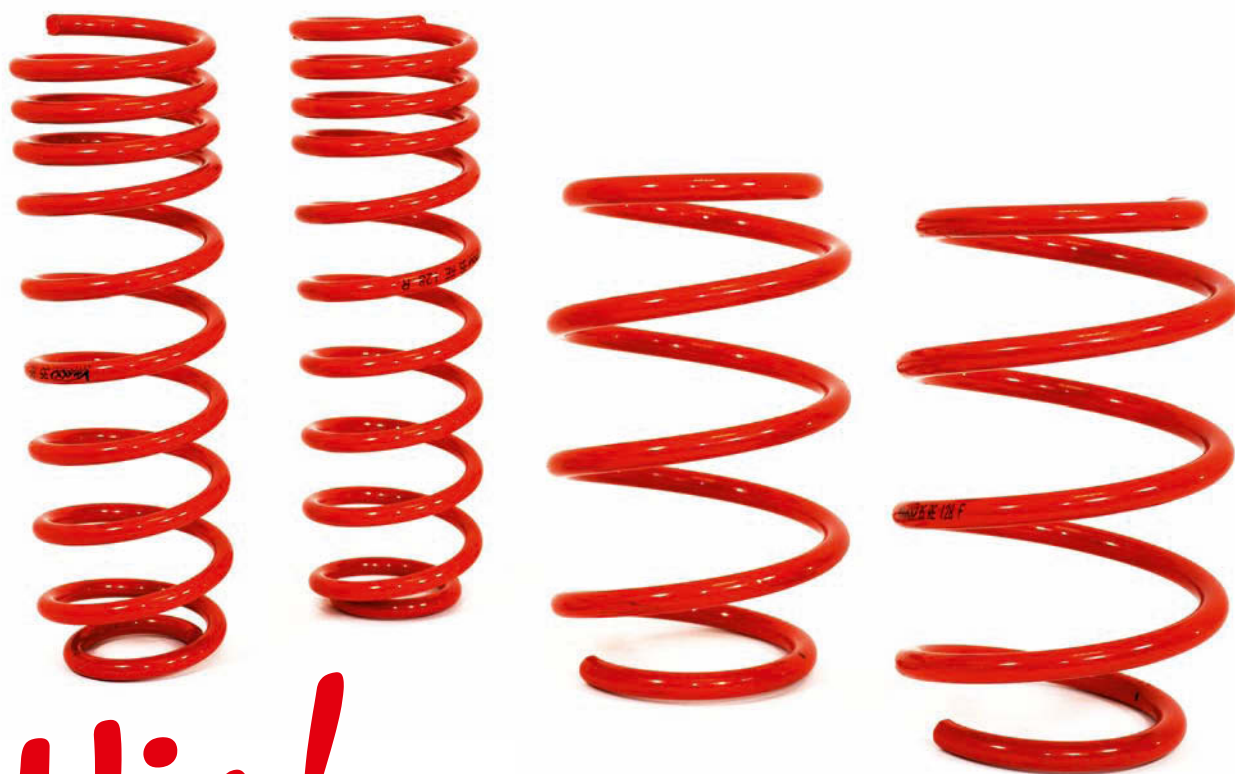
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FAST CLUB

We drive the face-lifted M135i and M6 Cab plus the X6 M for good measure because... well, why wouldn't you?

Words: Elizabeth de Latour
Photos: BMW

M135i

Say what you will about the second generation 1 Series' fishy/froggy face (I like it, but then again I've got one) but you can't argue with the fact that it has been a roaring sales success and, more importantly, introduced the world to the M135i – arguably one of the greatest performance bargains of all time and one of the hottest of hot hatches. Now the time has come for the F2x 1 Series' LCI (Life Cycle Impulse), BMW's term for a midlife face-lift, and the end result is a car that is a little easier on the eye and will likely be even more popular.

There's a more attractive front end with slightly more conventionally-styled headlights though we're of the opinion that the rear revisions aren't quite as successful but the overall effect is a success and it's a good-looking hatch. The interior revisions are minor, with a boost in standard spec (all cars now get climate control, for example) and swish new monochrome graphics for the heating controls. As far as face-lift packages go, it's a success.

Of course, the M135i is all about going fast and BMW has seen fit to up the power... by 6hp. That does at least bring it in line with the M235i at 326hp and ensures you won't be at a disadvantage owning an M135i come pub power figure bragging time. Unsurprisingly, an additional 6hp has made no difference to the car's performance, that is to say that it still feels absolutely ballistic out on the road. We've never experienced a car that is so easy to drive quickly and without even trying. At one point during a B-road blast I was casually wondering about



DATA FILE

ENGINE: 3.0-litre straight-six N55B30

TRANSMISSION: Six-speed manual, optional eight-speed Sport Auto

WEIGHT (EU): 1505kg (1520)

MAX POWER: 326hp @ 5800-6000rpm

MAX TORQUE: 332lb ft @ 1300-4500rpm

0-62MPH: 5.1 (4.9)

TOP SPEED: 155mph (limited)

EMISSIONS (CO₂): 188g/km (175)

FUEL ECONOMY (MPG): 35.3 (37.7)

PRICE (OTR): £31,325 (five-door £33,345)

Figures in brackets are for Sport Auto

what to have for dinner that evening whilst chucking the M135i through the corners with careless abandon. That's not to say that you feel detached from the driving experience, far from it, the M135i is an engaging and communicative steer but there's so little drama to proceedings you really do just get in and drive it really, really fast. Turn off the traction control and you can have all the drama you want, the E-diff making a fine fist of emulating a mechanical LSD and you can get the tail out with no effort or lay down some fat 11s if the mood takes you. It sounds awesome, too, ignoring the fact that the speakers do play a part in channelling the engine noise to the



occupants, but experienced from the outside, away from the electronic audio frivolity, it still sounds rude and as fruity as you'd want and hope it would.

If it was my money, auto takes preference over manual (more gears, better fuel economy, faster), especially as the shifts are so quick and crisp it makes you wonder what the point of M DCT is. And while the standard suspension is good, EDC is better, allowing you to go harder or softer and it feels like less of a compromise and makes the car more capable. If you want a small, fast, practical do-it-all hot hatch, aim your £30k at the M135 and pull the trigger, you won't regret it.



DATA FILE

ENGINE: 4.4-litre twin-turbo V8 S63B44

TRANSMISSION: Seven-speed M DCT

WEIGHT (EU): 1925kg

MAX POWER: 560hp @ 6000-7000rpm

MAX TORQUE: 502lb ft @ 1500-5750rpm

0-62MPH: 4.3 seconds

TOP SPEED: 155mph (limited)

EMISSIONS (CO₂): 239g/km

FUEL ECONOMY (MPG): 27.4

PRICE (OTR): £97,300

M6 Convertible

Would we buy an M6 Convertible? If we were in the market for a big, fast, comfortable drop-top, the answer would be a resounding yes because the M6 delivers everything you might want from a car like this. For its LCI treatment, BMW has dumped a whole lot more standard equipment into the big Six (over £10k-worth in fact) and cleaned up the already elegant lines for a bit more aggression and road presence. It's a delicate beauty treatment but when you're starting with what is arguably a pretty good-looking car in the first place, you'd have to have fists made from ham to mess it up.

Under the bonnet it's business as usual, which is a slightly rude way of saying it's still got a 4.4-litre twin-turbo V8 (remember when something like that was just a schoolboy's dream and now it's an everyday reality?) making 560hp and 502lb ft of torque. That means 0-62mph in 4.4 seconds and a top speed of 155mph but lots more if

you take the limiter off. A big capacity V8 plus twin-turbos means that torque peak is spread thickly across most of the rev range, like butter on freshly sliced bread. It's equally delicious, unless you have a gluten allergy, but at least that won't affect your enjoyment of the S63 V8 and it's a monster of a motor. Prod the throttle at pretty much any revs, any speed and the M6 surges forward on a wave of torque and that means it's very easy to go very fast indeed without noticing and that means you could get in a lot of trouble very quickly. It makes driving a much more relaxing experience, having so much performance on tap, as there's pretty much no situation that you can't drive your way out of. If you get stuck behind slower traffic you don't have to wait for an overtaking opportunity, it happens almost without you realising it; you think 'I could probably overtake this car if I... oh, I've already done it'. On rough and damp surfaces traction is at a premium but for the

most part it manages to put down its power pretty well and you can deploy a healthy dose of throttle without too much concern.

The only thing that really hampers the driving experience is the size of the M6 because it is most definitely a big car; wide and long, it feels like it takes up a lot of space on the road. On A-roads it's fine but funnel it onto a B-road and it feels big and a bit out of its comfort zone. The ride is also pretty harsh and we also noticed what seemed like some scuttle shake over rough surfaces, a slight shimmy through the dash and steering wheel. But aside from this there's little to moan about here, really, and it remains a hugely impressive car. Yes, it is expensive but it's priced in line with its rivals, and is actually cheaper than a good few of them, so that's a moot point really. If you happen to have £100k burning a hole in your pocket and an overwhelming desire for a fast convertible, we can't imagine you'd be disappointed with the M6.



X6 M

If you like cars that make you laugh out loud then the X6 M is the car for you. It may go against everything that M once stood for (a 4WD auto 4x4 with an M badge?!) and it may get plenty of environmentalist sorts raging, but that cannot take away from the fact that it's actually a massively impressive machine.

The X6 M looks big on the outside and feels big on the inside but the most surprising thing about it is that it's actually surprisingly easy to pilot with confidence, despite taking up most of most of the roads you'll find yourself driving down. The elevated driving position offers a good view of your surroundings and the massive mirrors give you a good idea of whereabouts you are in the road, making the X6 M quite easy to place.

The most amusing aspect of the whole driving experience is that it drives nothing like how you might expect. It doesn't feel heavy – it is most definitely a heavy car at 2340kg – but it doesn't feel like it's carting around anywhere near that sort of mass. The fact that it's so powerful is a massive help, obviously, and while the M5 and M6 have to make do with 560hp in standard form, the X6 (and X5) M models now boast

575hp, 20hp up on what they started with when first launched, which means it feels absolutely ballistic. 0-62mph comes up in a scarcely believable 4.2 seconds, which puts it quite literally a fraction behind the DCT-equipped M3 and M4, seriously impressive when you consider that it weighs over 700kg more. The drive-by-wire throttle is amusingly light, which means that it feels even faster than you expect, especially compared to the M6, whose pedal requires a lot more effort to get it moving, and it's very easy to pile on the speed without even trying. The steering is light and while it's not the last word in communication and feel, it's fine and allows you to drive briskly with

confidence, while the brakes are suitably powerful though after a brisk drive involving few hard stops the pedal travel increased and braking required a little more commitment, though that's not too surprising considering they're trying to cope with over two tonnes of rampaging X6. But, overall, it's a surprisingly positive experience behind the wheel.

The X6 M definitely won't appeal to everyone but we can appreciate why it's so popular and those that love it are truly enamoured. It's not for us, even if our numbers came up, but we doubt you'll find another car that makes you giggle quite like the X6 M ●

DATA FILE

ENGINE: 4.4-litre twin-turbo V8 S63B44

TRANSMISSION: Seven-speed M DCT

WEIGHT (EU): 2340kg

MAX POWER: 575hp @ 6000-6500rpm

MAX TORQUE: 553lb ft @ 2200-5000rpm

0-62MPH: 4.2 seconds

TOP SPEED: 155mph (limited)

EMISSIONS (CO₂): 258g/km

FUEL ECONOMY (MPG): 25.4

PRICE (OTR): £93,080



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REACHING THE ZENITH

An S54-swapped, supercharged,
600hp E30 M3 is about as
good as it gets...

Words: Elizabeth de Latour Photos: Steve Hall



You know this is going to be good. You've seen the front cover, you've read the taster, you've probably not been able to restrain yourself and may have already been drooling over the pictures, so you know that you're about to read about something special. Certainly it's going to upset some people because there's a lot going on here, including the RHD conversion and the S54 swap carried out on a genuine E30 M3, so in the eyes of many purists that's it ruined, basically. But we're open-minded here at *PBMW* towers and if you're reading this mag then we'd like to

think that you're cut from the same cloth and can appreciate cars that might offend those of a more delicate disposition. And this is a car that most definitely deserves some appreciation.

BMW's have always been a big part of Sam Le Fevre's life. The 31-year-old construction company director first fell for the Bavarian marque when his oldest brother picked him up from school in an E30 325i. "For me, it's the four decades of motorsport heritage and the connection between driver and machine that makes BMW so special. You just don't get that with other affordable marques," explains Sam. And the E30 M3 is arguably

the ultimate definition and concentration of that BMW essence.

He began his BMW journey with an E46 M3 Convertible and while his car history is mixed, with a couple of fast Fords in there for good measure, his passion for BMWs, and particularly for the E30 M3, has clearly bubbled to the top. "I've always loved the E30 M3; it is a true homologation model with a chassis that draws you in and gives you confidence," he says. And with the means available, a purchase seemed inevitable, though it was not without some drama, as he explains: "I found the car on PistonHeads advertised at a trader for



£16,000. I arranged to see it and travelled down to Sussex. I looked the M3 over and told the trader the car had been in an accident and that he needed to revise his price. I said the car needed to go on a jig as I noticed the passenger wheel was sitting back 15mm towards the skirt. He refused and said that it was just an alignment issue. I left my details and told him to contact me if he didn't have any luck. A month passed and I got a call asking me if I wanted to come down and view the car again. I said there would be no point if he was still asking for the same sort of money. I went and viewed the car for the second time and told them I

wouldn't be coming back if we couldn't do a deal on this occasion. We haggled and eventually agreed a sale for £11,000."

Even with the potential chassis problem that was something of a bargain, especially considering the selection of Alpina additions the car was sporting and the small matter of the freshly rebuilt engine, totalling a cool £6000 in bills.

Now all that was needed was some inspiration and, luckily, Sam's favourite BMW magazine happened to provide just what he was after: "I was reading *PBMW* when I came across Del Sanchez's masterpiece: the E30 M3 with a S54

powerplant. To me this was perfection – BMW's best chassis combined with its best six-cylinder engine! So I thought I would have some of that in my flavour. As soon as I picked the car up I drove it straight to the transplant centre, aka Munich Motors in Wokingham, to see the man himself, Clive Sanchez. He checked the car over, said it needed some jig or bulkhead work and he booked it in for two months later. I got impatient after a fortnight and phoned Sue, his wife, and said I was dropping the car down because I was doing my driveway (a poor excuse, I know). He started doing the teardown ready for the S54 transplant and

that's where we ran into problems as the shell needed major surgery!"

The engine came first, though, and while Sam knew he was fitting an S54, he wanted to add a little extra spice: "The plan was to build something with forced induction, either a turbo or supercharger. I spent a Saturday at Munich Motors with Clive looking around the engine bays of the two S54 transplanted E30s that they had down there. After careful consideration, measuring and thinking about the driveability of the car, I decided that the supercharger route was the only sensible option. The engine came from Quarry Motors and while there was a problem with the Vanos system the guys at Quarry sorted it out with little fuss and we then added an ESS VT2-550 supercharger."

On its own the 550 kit makes an impressive 550hp according to ESS along with 340lb ft of torque. But, of course, there's a lot more to a build like this than simply slapping a supercharger onto a stock engine. Sam's powerplant has been beefed-up with a few supporting mods to assist with its longevity and add some additional power because, you know, 550hp isn't nearly enough in an E30...

On the sensible and practical front, the engine has been fitted with an M50 sump for space reasons and the Vanos was rebuilt with Z4 M bolts. The big end bearings have been uprated and fitted with stronger ARP bolts, there are custom crank and supercharger pulleys, a Storm Developments Garrett chargecooler, a custom E36 M3

Docking Engineering radiator, Denso iridium spark plugs, Bosch coil packs, Bosch Motorsport grey injectors, a Bosch 044 fuel pump and a Fuel Labs fuel filter. The secondary air pump and rear lambda sensors have been deleted and the engine has been treated to an Alpha N conversion and a Setrab oil cooler.

"Once the engine had been put in the bay, that's when we hit the serious problem," Sam continues. "We realised that the chassis legs and bulkhead had been repaired very poorly. I was in utter despair thinking I was going to have to scrap the car but I decided that the car was not going to beat me. I couldn't find a decent E30 M3 shell anywhere so I figured that, as BMW had built every other M3 in RHD, I'd make my





own RHD E30 M3. I managed to source a clean 316 shell that had covered only 50k miles and had blown a head gasket with a plan to re-shell the car completely and take all the quarter panels etc. off. But after dropping the shell off to Eddie at Crash Repairs in Edmonton he said just bring in the front end from the 316 shell and he would take care of it. To say that I was a little apprehensive was an understatement. I went up to Big Bavarian Beauties on a Saturday morning with my petrol disc cutter and set about cutting the front half of the car and roof skin off, and putting it in the back of my van, ready for the journey back down to London. I dropped the front end down to Eddie and he said that he'd need the car for four weeks and that the shell needed two new inner and outer seals and a few other parts. I got all the bits and dropped everything off with him on a Friday. When I got a call on Monday asking me to come over I was expecting the worst, but I was amazed to see the car complete and sitting on jig pins. Eddie had basically drilled out all the spot welds from the A-pillars, bulkhead and floorpans and grafted the 316 front end straight on back in the factory spot welds in a weekend. I was gobsmacked. We picked the shell up and drove straight up to SPL for a full acid dip and e-coat session."

With the chassis drama dealt with, Sam and the guys could get on with the task of getting everything running right, but that wasn't an easy process either, as he explains: "Once Clive had the car running we started coming across numerous problems. The biggest one was that the car was down on power dramatically compared to what it should have been making. Clive suggested I visit Storm Developments in Aldermaston so I drove over there where owner Andy and I instantly clicked."

Andy used his engineering superpowers to diagnose the problem and had Sam removing the front bumper to access the chargecooler,



“I’ve always loved the E30 M3; it is a true homologation model with a chassis that draws you in and gives you confidence”



which Andy duly whipped off and bypassed before telling him to take the car for a spin up the road. “Well that’s exactly what happened,” laughs Sam. “I pulled out of the workshop, stabbed the throttle and the rear wheels lit up! The car had rocketed from 260hp to 325hp in an instant but it was still down on what we were expecting.”

So Andy’s next plan of action was to fit a Garrett chargecooler. This helped take power up to 410hp but now the exhaust wasn’t pulling its weight. “Andy suggested getting the exhaust modified,” says Sam, “so I contacted Hayward & Scott and dropped the car off with them along with a drawing Andy had produced so they knew what sort of system was required. It now sounds amazing.”

Exhaust sorted, Sam headed back up to Storm Developments where Andy changed the plugs and coils before strapping it onto the dyno. “We were very disappointed when it only made 450hp,” says Sam, “so Andy measured the boost and it was way down on the 7psi it should have been producing. He worked out the sizes for the pulleys we needed to get the boost we were aiming for and I went off to get them made up. I popped back to Storm a few weeks later. Andy took the pulleys off me as soon as I got out the car and fitted them on the spot before he told me to put the car on the ramp.” This was the moment of truth and the numbers didn’t disappoint: the M3 putting down a seriously impressive 580hp and with a few tweaks to the map the final

run produced 604hp. That’s more like it!

So, Sam now had a RHD E30 M3 running one hell of an engine setup. But that alone does not make for a complete package. It was time to address the suspension, and Sam was very particular about his upgrades in this department. “I took a ride in some cars with H&R and KW coilovers and found them all to be uninspiring with both manufactures unable to do custom damper designs,” he explains. “I was recommended a company called AST by Demlotcrew who raved about the products so I contacted them and spoke to Curtis Woodman who told me to bring the car up for him to have a look at and see what we could come up with. After driving over to Cheltenham and discussing the options we nailed down a

DATA FILE

ENGINE: 3.2-litre straight-six S54B32, M50 sump, Vanos rebuilt with Z4M bolts, uprated big end bearings with ARP bolts, custom Vortech V3Si supercharger kit, ESS inlet plenum, custom crank and supercharger pulleys, Storm Developments Garrett chargecooler, Docking Engineering custom E36 M3 radiator, Denso Iridium Racing IXU01 spark plugs, Bosch coil packs, Bosch Motorsport grey injectors, Bosch 044 fuel pump, Fuel Labs fuel filter, secondary air pump deleted, rear lambda sensors deleted, Alpha N ECU conversion, Setrab oil cooler, Hayward and Scott stainless steel custom exhaust with 3" piping and crosspipe

TRANSMISSION: E36 M3 3.0 ZF Type C five-speed gearbox, TTV lightened flywheel, Sachs Hybrid HD clutch, modified Rogue Engineering short shifter, CATuned chromoly driveshafts, Demlotcrew 3.15 Ratio Motorsport diff, Z3 M modified diff cover

CHASSIS: Summer wheels: 8.5x17" (front) and 10x17" (rear) BBS LM wheels with 235/40 (front) and 255/40 (rear) Michelin PS2 tyres. Winter wheels: 8.5x17" (front and rear) BBS CH wheels with 235/40 (front) and 255/40 (rear) Michelin PS2 tyres. AST 5100 and 5200 custom coilovers, Sparco front strut brace, Ultra Racing rear strut brace, Eibach anti-roll bars (front and rear), E46 Clubsport steering rack, Siemens VDO hydro-electric power steering pump, reinforced front subframe, rear beam modified with camber and toe correction, aluminium front control arms, Treehouse Racing front control arm bushes, E46 M3 guibo, BMW Motorsport Group N rear beam bushes, AKG rear trailing arm bushes, AP Racing six-pot calipers with 330x28mm discs and PFC Z-rated pads (front), AP Racing four-pot calipers with 315x25mm discs and Ferodo DS2500 pads (rear), Stainless steel brake lines

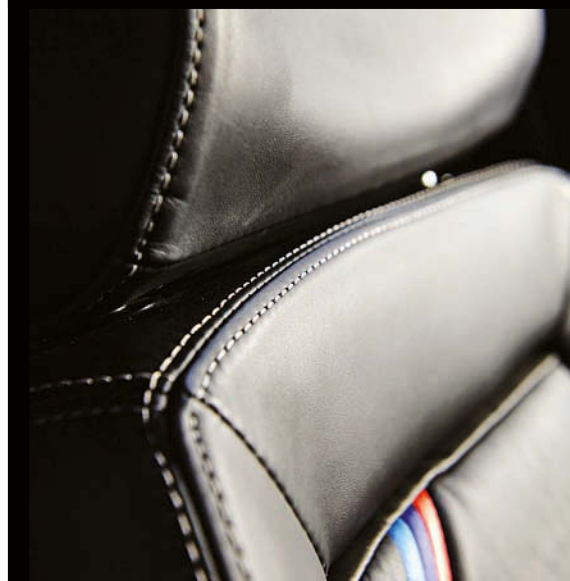
EXTERIOR: Shell acid dipped and e-coated, full bare metal rebuild and RHD conversion consisting of RHD

front end, new inner and outer sills, non-sunroof roof skin, rear light panel, front slam panel, Sport Evo front wings, BMP carbon/Kevlar bonnet & front bumper, Evo II brake ducts, Evo II front chin spoiler, Sport Evo carbon fibre front splitter, Sport Evo rear spoiler with carbon fibre adjustable gurney flap, full respray in Alpine white, smoked Hella headlights, smoked front indicators, smoked side repeaters, red tinted rear lights, US rear numberplate filler, pop-out rear window conversion

INTERIOR: Full retrim in black Nappa leather with silver stitching on Recaro LS front seats, rear bench, centre console, handbrake and gearstick gaiter, M Tech II 370mm steering wheel, Z4 M sport button, black carpet and mats, map reading light, rear blind, custom dials, BMW premium rear shelf speaker shells, under seat front fire extinguisher

AUDIO: Alpine CD-177BT CD head unit, Focal poly glass 5.25" components front and rear, JL Audio 12W3V3-2 12" 500W RMS 2ohm subwoofer, Alpine PDX-V9 4x100W plus mono 500W digital power amplifier

THANKS: Munich Motors, Jay at NV Workshop, Storm Developments, Sol at E30 Parts, Big Bavarian Beauties, Crash Repairs Edmonton, Surface Processing Limited, Lee at Quarry Motors, Fab Recycling, Hans at ESS Tuning, Alan at Docking Engineering, Jody at Atec, Andy at Streamline Motors, Dips at Custom Cars, Adam at B-Trim, ESP Blasting & Powder Coating, Nigel at Moseley Motorsports, the parts department at Stephen James BMW Enfield, Park Lane BMW Battersea, Kirby at C3BMW, Vac Motorsports, David at BG Developments, Curtis at AST Suspension, Ian at Hayward & Scott, Igor at CATuned, Nick at Alarms N Sounds Chingford, Paul at Glasstec, Xworks, Pete at PMW, Andrew at Demlotcrew, Andrew Johnson, Kos, my wife Aleyna and my son Leo



damper design for the rear, which is basically an inverted wasted shaft DTM replica with custom valve and spring rates. The car has also had the front subframe reinforced, aluminium control arms, Eibach anti-roll bars, Treehouse Racing front control arm bushes, dual diff mount and BMW Motorsport bushes as well as countless other additions and tweaks."

The brakes also needed attention and for some serious stopping power Sam turned to AP Racing, fitting the car with a set of six-pot front calipers with 330mm discs and four-pot rear calipers with 315mm discs, which are more than enough to slow the E30's lightweight frame down from silly speeds. The drivetrain has also been beefed-up, with the S54 mated to a ZF five-speed

gearbox from an E36 M3 3.0 that's been fitted with a TTV lightened flywheel and Sachs Hybrid HD clutch. A CATuned modified chromoly driveshaft (this E30 M3 has a bit of an appetite for driveshafts) and a Demlotcrew 3.15:1 Motorsport diff with a Z3 M modified diff cover were also fitted.

While the performance modifications are absolutely full-on and barely contained, the styling is the complete opposite and Sam has kept things very subtle, allowing the E30 M3's iconic good looks to shine through with only the slightest smattering of visual tweaks. We've got to go for the wheels first. They are genuine BBS LMs – one of the Holy Grails of the wheel world – and are pretty rare to boot. There's quite a story behind Sam's acquisition of them. "I've always loved

BBS splits rims," says Sam, "and couldn't have the usual BBS RS type of wheel as they wouldn't fit over the AP Racing BBK, so the hunt started for a set of staggered LMs. Well let me tell you, you have more chance of your numbers coming up than you do of finding a set. After being let down by a couple of sellers, I was contacted through one of the forums by a guy called Angel from Toledo in Spain. He had the wheels I wanted but wasn't willing to post them; no problem, I said, I could come and collect them myself but that ended up being rather sooner than I anticipated as I received a call after work one Friday from Angel saying that I needed to collect them before the next weekend or he had another buyer lined up. So my brother and I rushed home, picked up

“I pulled out of the workshop, stabbed the throttle and the rear wheels lit up!”



the family 335i and told my wife that I was going to Spain for the weekend, leaving her to cope alone with our four-month-old baby boy. We'd also been burgled just two days previously, so she was not impressed! We booked the tickets anyway, chucked a case of Red Bull in the car and set off on a mini endurance race from London to Toledo and back again!" Now that is dedication and shows just how far some people are willing to go for the right set of wheels, but the impromptu road trip was absolutely worth it as these wheels look insanely good on the car, especially after their recent refurb and darker centres.

For the outside, Sam looked to BMW's other M3 offerings for inspiration, opting for an Evo 2 chin spoiler with carbon splitter and

an Evo 3-style spoiler with a carbon gurney flap. A set of smoked Hella front lenses and indicators were added and Sam tinted the rear indicators for the finishing touch.

Inside, the car already had a set of very rare Recaro LS seats in mint condition but covered in the very dated check pattern that Sam was not a fan of. Having seen an E30 Europameister and fallen for that interior, Sam took his interior over to Adam at B Trim. The seats have been trimmed in black Nappa leather with silver stitching, with B Trim also making a non-sunroof black headlining in BMW fabric and recovering all the pillar trims in black vinyl. You'll also find an M Tech 2 steering wheel and an E36 M3 3.0 gear knob.

It's taken Sam three years to get to this

stage with the car and we wager that back when he was struggling to decide whether or not to even keep it he couldn't have imagined it ending up like this. For a lot of people, their projects seem more like a sprint rather than a marathon, with owners desperate to meet show deadlines for the big reveal. This build, however, has definitely been the latter. And while it's been far from plain sailing for Sam, the journey has been well worth every hardship as the end result delivers the sort of pleasure and enjoyment nothing else can. "The look on a Ferrari F430 owner's face after being wasted by my scrap yard survivor was priceless! I was laughing like a child!" Sam says. For some, this car might go too far but for us, going that bit further is what it's all about ●



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RECIPE FOR SUCCESS

Take one 525e. Garnish with an obscure colour. Stir in a vast engine.
Sprinkle over a few unique touches, and infuse with a piquant
fusion of childhood dreams and heartfelt tributes.
That's the recipe for a delicious E28...

Words: Daniel Bevis Photos: Andy Tipping





“Spenn convinced me to fit the S38B36 for strength and reliability reasons”

DATA FILE

ENGINE & TRANSMISSION: 3.5-litre straight-six S38B36 (from E34 M5), Fritz's Bits stainless steel manifold and exhaust system, Ramair filter, custom alloy radiator with Spal electric fan from Pro Alloy, Mocal oil cooler, custom mounts, brackets and fittings, 5-speed E34 M5 gearbox, E12 propshaft, E34 M5 LSD

CHASSIS: 8x17" (front) and 9x17" (rear) BBS RC009/010 wheels with 205/40 (front) and 215/40 (rear) Yokohama Parada Spec 2 tyres, custom Gaz coilovers with adjustable rebound, 550lb front springs, 275lb rear springs, Whiteline anti-roll bars, Powerflex bushes in front suspension arms, E34 M5 brakes

EXTERIOR: Original Akazien green paint, rolled rear arches

INTERIOR: Black and charcoal houndstooth interior with recovered Recaro Speed front seats, AC Schnitzer steering wheel, 160mph speedo

THANKS: Spenn (now set up in business as BMP Conversions), my mates Terry and Ray for workshop space and their help, my mum and dad for garage space, Guy's mum for upholstery, and Patty for precision machine work. And my girlfriend Nic for her love of cars!





There's a perennial and enduring problem with motorists in the world today: misplaced 'M' badges. Every day we see BMWs with erroneous badging glued to their rumps in a haphazard and higgledy-piggledy manner, fooling no-one and diluting the specialness of true M-ness for everybody else. Bone-stock 520i saloons with M5 emblems, M-badged E46s with 320d motifs still in place, chunky SUVs wonkily rebranded 'MX5', despite that being the name of a rather different kind of car. It seems that everyone wants to tap into that hallowed motorsport heritage, regardless of such frivolous fripperies as honesty, logic, or appropriateness.

Sometimes, however... sometimes it's acceptable. Bear with us on this, it'll all make sense. You see, the E28 you're looking at here is, in fundamental DNA at least, a 525e. And yet it's wearing the fabled M badge, and we're perfectly okay with that. How can this be? Fear not, all will become clear...

But let's start with the who rather than the how, shall we? Jim Mountain is the name to note down, and he's a man who's been perving over Beemers since you were in short trousers. "I've been into BMWs as long as I can remember," he reminisces with a smidge of whimsy. "I did an apprenticeship in the bodyshop of the local main dealer and stayed there for ten years or so before moving into the family business. As a kid I remember pictures of M1 Procars in my uncle's *MotorSport* magazines, and a photo of an airborne 3.0 CSL at the Nürburgring – I was hooked from then, and knew I had to have an E30 as soon as I could insure one!"

Sure enough, after rolling the dice with fate in a protracted bout of 'the waiting game', Jim found himself with the keys to an E30 318i two-door in his hand, a car he wasted no time lowering over some oh-so-period MiM rims. The scene was set, the passion was firing on all cylinders, and it was only a matter of time before more blue-and-white propellers followed: an '86 325i introduced his right foot to the torquey swells of the straight-six, quickly usurped by an engine-failure 318i that Jim and his mates hoiked the motor out of before spraying Dakar yellow and slathering in Recaros and 17" Hockenheimers, before moving on to another 325i and a bona fide E30 M3 Evo 1 on BBS RSs and Konis. It's fairly safe to say, then, that he's a man who knows what he likes. And what he likes is modifying BMWs. We're in good company.

"I also had an E28 520i, largely thanks to Mike Burroughs," Jim recalls. Funny how the name of the ubiquitous Stanceworks founder crops up so often in our E28 features, isn't it? The dude has a lot to answer for. "It was rough, but fun," he continues, "but I wanted to find a better one – something more solid, but still cheap enough that I could modify it without feeling too bad about it! And when I saw this one on eBay – in Akazien green, which I hadn't seen before – I knew it had potential, despite being a 525e auto. It was in pretty good condition, in fact – all original paint, with a few age-related marks and dents, and it's still like that today. I like its timeworn look."

That said, it wasn't a car that wanted Jim to just jump in and enjoy. In addition to the usual front footwell and inner sill rust

issues, it wasn't all that keen on starting up and letting him take it home. "It wouldn't fire up at all when I went to view it in Nottingham," he says, "so I left it and went to look at another one in Derby. That one was quite a rare manual 525e – but really rotten. Then I got a call from the guy with the green car, which he'd got running; we made a deal, and I drove back to Norfolk in it." So far so good, then. But where does the M badge enter the story? Patience, reader, patience – we'll get there in due course. Jim's just got his car home, let's see what he does next...

"The modifying didn't actually start for another year," he says. "I took the car over to my mate Spen's, and he pulled out the old 2.7 lump and autobox after I had stripped the interior. It then spent about six months on blocks on his shingle drive! I'd wanted to put an S50 in it but Spen convinced me to fit the S38B36 for strength and reliability reasons." And there we have it, ladies and gentlemen: a logical rationale for stuffing an E34 M5 engine in there. Strength and reliability. Sure. And there's the fringe benefit of having enough horsepower to knock the Earth ever-so-slightly off its axis, of course.

Jim was sufficiently enthused by the idea to dive into buying the first S38 he came across, complete with transmission, and Spen set about wriggling the oily bits into the appropriate position while Jim busied himself with fabricating various mounts for the engine, gearbox, and assorted ancillaries, including a setup to relocate the coil. "Spen dealt with the loom mods, which was no easy job as E34 ECUs live on the

opposite side of the car to the E28's, but he sorted that," he says. "Then we tackled the brakes, fitting the E34 M5 setup along with a Clio servo custom-fitted to clear the plenum. When Spen was happy with all the work so far, he took the engine out again and I took the car over to another mate Terry's workshop to take care of the rust issues, while Spen took the head off and rebuilt it." It was all looking rosy at this stage, with the mods progressing well and the car not really fighting back to any great degree, and with the refreshed engine back in situ it was treated to a custom Pro Alloy radiator and a Fritz's Bits manifold and exhaust system to keep everything functioning at maximum efficiency. At least, that was the theory.

You know how annoying it is when your grandma says things like 'patience is a virtue', and 'everything comes to he who waits'? Yeah, she's right. You should always listen to your grandma, no matter how deranged she may appear. Jim shouldn't have bought the first M5 engine he found. It turned out to be a bit of a pig.

"It was all running, just... not well," Jim grimaces. "Spen spent a few weeks swapping bits on and off from his own M5, testing everything for weak links, trying to identify what was wrong. He unpicked his loom mod and then refitted it, but it still wouldn't run properly. The head came off for testing but there was nothing amiss there. We were mystified." What would you do in this situation? Persevere with a relentless programme of trial-and-error testing, ultimately stripping the whole thing back to first principles? Or would you take the 'sod it' approach? Jim opted for the

latter. "Time was slipping away, we'd been at it 18 months, so I just bought another engine," he says. And guess what? That one didn't want to play ball either. "It was pulled apart, rebuilt, refitted, but it didn't run well. We just couldn't get the emissions down. After chasing problems round and round, we finally deduced that the brand-new lambda sensor we'd bought was faulty – having replaced that, everything was fine!" A merry dance, then, but it all came good in the end.

The upshot of all this enduring endeavour is a healthy 315hp coming from a legitimate M5 motor, with an M5 gearbox, running through a modified E12 propshaft to an M5 LSD. That M badge is fully justified after all then, right?

Of course, you can't just throw a load of 1990s supercar-baiting grunt into a 1980s chassis and expect everything to be sunshine and lollipops. We've already touched upon how the lads grafted in the E34 M5's beefier brakes, but there was more to be done under the skin in order to make a car that was as competent as it was cocky. Suspension is key to a build like this, and Jim had charged the coil-toting eggheads at Gaz with the task of building up a set of bespoke coilovers to be fit for purpose. And with the stopping and the handling taken care of, it was time to tackle the aesthetics. Just what would be the right thing to do with the revered ol' sharknose?

"I knew I wanted to keep the original paint, it's such an unusual colour," Jim enthuses. "Aside from the wheels and stance, I wanted the whole car to look as original as possible. I did initially remove all the trim, ready to prep for a respray, but I quickly

changed my mind and put it all back together again so it could wear its 30-year-old paintwork with pride! It's got a slightly nose-down stance, and I wanted the rims pushed right to the edge of the arches, so the rears have been rolled to accommodate." The rims in question are a set of staggered BBS RCs, which Jim originally sprayed with body-coloured centres, although the gold that they're rocking now is certainly more of an eye-catcher on the showground. There's also a set of Schnitzer Type 1 Racing three-pieces that appear on the car from time to time, just to mix things up a bit. The interior enjoys plenty of this keenness for detail, too, with the black-and-charcoal houndstooth fabric from the seats of Jim's other E28 having been liberated to re-cover the Recaros that are now in place here. It's little details like this that really make a build, isn't it? "I had to leave the Harry Moss motion sensor on the dash, too, as a tribute to the '80s!" he grins.

"My favourite mod is the engine, for sure," Jim assures us, and it's pretty obvious why that is. "It makes me smile every time I'm behind the wheel. But when I park it up, I also love looking back at the car as I'm walking away, seeing my dad's old numberplate on there that I fitted as a tribute to him when he died." This has all been a very personal journey for Jim, with the help of his buddy Spen and a whole cast of extras, and you can be damn sure that his dad would be proud of the achievement. And Jim's not finished yet, not by a long shot. "Air-ride is a possibility," he says, a mischievous twinkle in his eye. "And a V8, naturally." So yes, we can forgive the M badge here. It actually fits rather nicely ●



“Aside from the wheels and stance,
I wanted the whole car to look
as original as possible”





A close-up, low-angle shot of the front left corner of a blue BMW M3. The car is parked on a dark, wet asphalt road. In the background, a thick layer of fog or mist obscures the road ahead, with some green foliage visible on the right side. The sky is overcast and grey. The car's iconic kidney grille, headlight, and front bumper are clearly visible.

TURNING JAPANESE

It looks and feels like a beautifully set up E46 M3 but this Irish racer conceals a host of Oriental charms.

Words: Iain Curry
Photos: Paddy McGrath

I set about mixing bits of BMW and Nissan parts together and somehow it all works



“I know every nut and bolt on this car,” said Colm Murray from Cork in Ireland. Now how many of us can honestly say that about the modified cars we own? A few, certainly, but those who build or rebuild modern cars with all their electric complexities are a rare breed today. Trouble is, we’re not quite sure if he’s a BMW modifier or not...

On the outside, of course he is. Pictured is his 2003 E46 M3. Great stance, nice rims with big brakes and a roll-cage spied through the glass. Underneath, it’s all a bit less German. In fact, it’s practically all Japanese – cue grumbles from the ‘foreign invader’ brigade – but here lies Colm’s expertise and the result is around 600hp and a drift machine of engineering quality rarely seen.

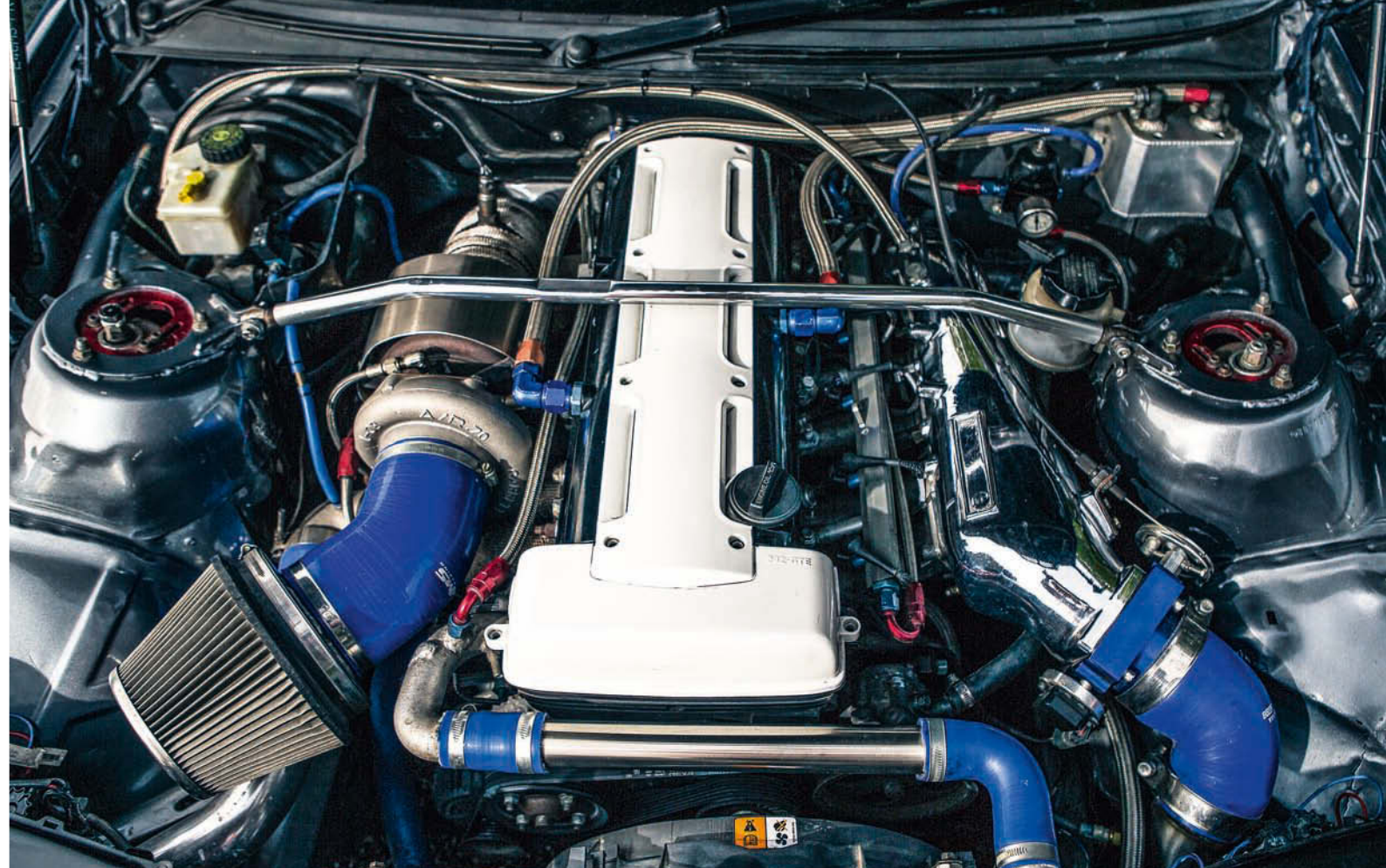
Key to this build was the Irish VW mechanic doing all the work himself. “It was not a big budget build and, like a lot of the guys who drift here in Ireland, I built and maintain the car myself,” the 32-year-old said. “Drifting is a rough and tumble sport and if I couldn’t fix and maintain the car myself I simply couldn’t afford it. I like to try and use parts that are relatively cheap and available to me, this is why I used the 2JZ engine as it was familiar to me and I knew there are big horsepower gains to be had for small money.”

Yep, it’s our old friend the 3.0-litre 2JZ Toyota Supra lump that we see cropping up in many BMWs. And whether you agree with a Japanese heart for your BMW or not, it’s a brilliant engine, highly tuneable and extremely tough, allowing for the sort of

power gains that can cost frightening sums if you start boosting your Munich motors.

Would it not have been easier for Colm to just go to work on a Supra or a Skyline, some will be asking? Thing is, Colm’s a true BMW fan, has history with the marque and likes the fact he’s got something different. “I loved the look of an E46 M3, and my goal was to keep it looking stock,” he said.

In his younger days he had plenty of E30 BMWs, from 318s to a 325i Sport – an ideal training tool for any budding drifter. “My 325i Sport was the first car I drifted in but the scene got a bit more serious in Ireland so I bought my first Nissan Silvia which is where I learned all my suspension knowledge and fabrication skills,” he said. “I was building and drifting numerous



Nissans for about ten years so I knew what worked and what parts were reliable.”

During this time Colm sampled an E46 M3 and said he liked the feel of it and that if it had more power and less weight it'd be an interesting thing to drive and drift. “I heard about a guy in Dublin racing an E46 M3 and that he had a spare bodyshell,” he explained. “After many phone calls I purchased it, but it wasn't rolling and was completely stripped. I mean it was just bare metal.”

Already with a 2JZ Supra engine and transmission in his garage the measuring began. “The install was actually very easy,” he said. “I think I had it fitted in about two hours after making up two engine mounts and a gearbox mount. I didn't have to modify any part of the bodyshell to fit it.”

But before you start thinking these 2JZ engine swaps are fine for everyone, even with Colm's expertise to get the car as it is today has taken the best part of two years. Only able to work on it during evenings or weekends, and when funds allowed, it has been a real labour of love.

The all-important suspension followed the engine transplant. “Of course I stuck to what I knew, which was Nissan parts, so I set about mixing bits of BMW and Nissan parts together and somehow it all works,” Colm explained with a laugh.

Nissan Silvia suspension has been used up front, including modified coilovers, while out back Nissan 180SX rear coilovers feature with custom top mounts. Rims are Japanese tuning scene Rota Grids in 10x18”

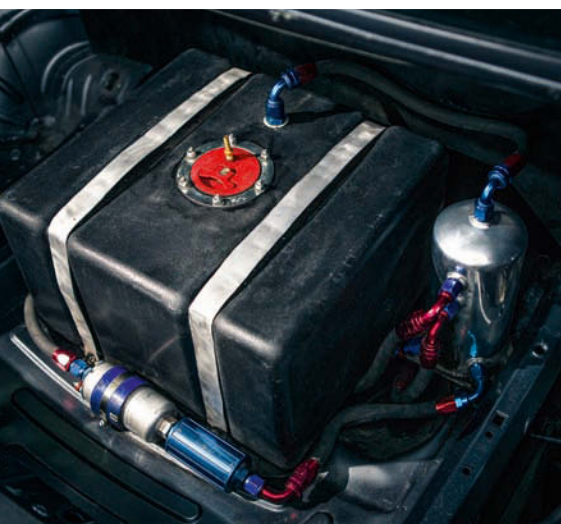
dimensions, shod in track rubber. Key to fitting these rims has been converting the E46's hubs to the full brake and hub assemblies from an R33 Skyline GTR, allowing for a far greater range of relevant wheels. It also means Nissan Skyline brakes are used, featuring four-pot and two-pot calipers behind the rims.

The underbody work was necessarily substantial, not least to allow fitment of a Nissan R33 Skyline GTR V-Spec differential and driveshafts: ideal hardware to endure the forces at work from top level drift competitions. The Toyota Supra's six-speed Getrag gearbox also made the leap into the M3's shell during the build, while an Exedy twin-plate clutch has been fitted for durability.

Despite Colm's M3 being a pure track car



Just the essentials in here with BiMarco Grip seats, Sparco harnesses, a hydraulic handbrake and a Haltech Racepak dash



without road registration, it could easily pass as a street car with its near-standard looks. A carbon bonnet and bootlid came up for sale from a friend so they were added, and although previously it was wrapped in camouflage style, the Irish drifter is happier with its more stock look of today.

The stripped cabin gives far more racing hints away. Colm custom-made and fitted the roll-cage himself ("what a pain in the ass that was!"), while a pair of BiMarco Grip race seats with Sparco harnesses hold driver and passenger in place, the pilot getting to grab the all-important hydraulic handbrake. The dash is a delight. It's been stripped and flocked to prevent sun glare on the windscreen, while behind the gorgeous dished steering wheel is a Haltech Racepak

While it's clearly not standard, exterior is surprisingly subtle for a drift car with Vorsteiner VRS-style carbon bonnet, CSL-style carbon bootlid and rear diffuser



digital display dash. "This was simple to fit because the Haltech is so easy to work with," Colm said. "I couldn't run the BMW clocks with the Toyota engine but with the Haltech it's a dash which could just plug into the ECU."

Serious racing machine? Without question. Colm said the car is good for 600hp at present, and hopes to see 700hp with a little more work. Key is his choice of turbo. "I had seen the Garrett GTX turbos on other cars and the response and power they create is awesome; it was an easy choice," Colm said. The work around it is substantial, too, with more custom fabrication needed for the exhaust manifold and full four-inch system, while helping things keep cool (no easy task in a drift car



of this magnitude) are an alloy radiator, four-inch front-mount intercooler and 12-row oil cooler. High octane juice comes from the boot-mounted fuel cell using a pair of Bosch 044 pumps and is fed into the engine via mighty 1000cc injectors.

All this work has allowed Colm to compete in the Irish Drift Championship, certainly the place a machine like this deserves to be seen, appreciated and enjoyed. It is something of a subtle masterpiece from the outside, hiding one of the most competent and complete Japanese builds underneath. It may not have much BMW DNA remaining but it is an incredible modified offering with that hard-to-beat E46 M3 body. It's an engineering marvel carried out by a very talented modifier ●

DATA FILE

ENGINE: 3.0-litre straight-six 2JZ-GTE from Toyota Supra, Garrett GT35 GTX turbo, custom exhaust manifold, custom full four-inch exhaust system, Tial wastegates, alloy radiator, four-inch front-mount intercooler, 12-row oil cooler, 1000cc fuel injectors, GReddy intake plenum, custom 90mm throttle body, Haltech ignition module, Haltech Pro2000 ECU

TRANSMISSION: Toyota six-speed Getrag gearbox, Exedy twin-plate clutch, Nissan R33 Skyline GTR V-Spec R200 differential and driveshafts

CHASSIS: 10x18" (front and rear) Rota Grid alloys with 235/40 Toyo R1R track tyres (front) and 265/35 Achilles ATR Sport Drift tyres (rear), Nissan Silvia front suspension swap including modified Kei Office coilovers, hubs with custom top mounts and modified steering

knuckles for more steering lock, custom lower control arms extended 40mm, Nissan 180SX rear coilovers with custom top mounts, rear subframe modified to take Nissan differential and driveshafts, custom strengthening of rear subframe mounting points and tied into the roll-cage, Nissan Skyline front and rear brakes with four-piston and two-piston calipers respectively

EXTERIOR: Vorsteiner VRS-style carbon fibre vented bonnet, E46 M3 CSL-style carbon fibre bootlid, rear diffuser

INTERIOR: Haltech Racepak dash, full custom T45 welded in roll-cage, original dash stripped and flocked, BiMarco Grip racing seats, Sparco harnesses, hydraulic handbrake, 30-litre Jazz foam-filled fuel cell, twin Bosch 044 fuel pumps with 2.0-litre swirl pot

FURRY ROADSTER

With an earth-shattering 800whp, this turbocharged Z3 M Roadster will definitely put the wind in your hair.

Words: Elizabeth de Latour Photos: Darren Maybury





While I'm generally not a huge fan of convertibles, Roadsters are a whole different kettle of slightly windswept, sunburnt fish. I

like the fact that they are built from the ground up as soft-tops, with less compromise on all fronts, and they don't attempt to try and shoehorn in a pair of rear 'seats' for the vertically challenged or your shopping. Engine. Two seats. Boot. Done.

BMW's Z3 was met with mixed reviews when launched, but it's ageing well. The retro lines look ever more retro, and the styling has plenty of character and muscle about it. When it was handed over to BMW M's engineers to work their magic, there were certainly plenty of fireworks and, while the M Coupé might be the one that turns heads, there's lots to love about the Roadster, especially when there's the small matter of 800whp going on.

Why wouldn't you want to stuff a turbo under the bonnet of your Z3 and make 800whp? Mark Christofis is a man who clearly took a look at his life, realised it was missing an 800whp Z3 Roadster and set about correcting this problem. Mark is a man who loves cars and, as a metallurgical engineering consultant, is lucky enough to be in a suitably serious and important-sounding job that means he can really indulge his passion for all things automotive. Hats off to that man.

This passion for cars is long-standing and both his previous and current rides are seriously nice. When it comes to cars

Chris does not beat around the bush: "My first car was a 1970 Pontiac GTO with a manual four-speed transmission and 400 CID Ram Air III engine." This engine was a 6.6-litre V8 which made 350hp; it was a hell of a way for Mark to earn his motoring stripes. "I've owned a number of performance/sports cars over the years," he continues, "including various muscle cars and European models. I currently have a Ferrari 360, an Audi B8.5 S4 and, of course, my BMW. I've also driven a host of other performance cars like the Dodge Viper, various 911 Porsches, Nobles and Lotuses. I've been interested in cars since I was a kid, particularly American muscle cars, and being born and raised in Detroit it was almost a natural occurrence. Of course, this carried over into becoming an engineer and I eventually wound up working for Ford Motor Company as a Metallurgical Technical Specialist for the Product Development Group of Axle Driveline. So my passion for cars runs deep.

"My brother and I were both really into cars when we were younger and we carried that with us through the years. Early on we pretty much did all the mods ourselves out of necessity as we just didn't have much money, but as I got older and eventually married, it became increasingly difficult to work on them as I just didn't have the time with work, kids and all. Eventually, though, the modification bug hit again

but now I leave the major work to the professionals."

And this Z3 has had more than its fair share of work, that's for sure. Mark's been a fan of BMWs for around 15 years now, having cut his teeth on a '95 M3, but this Z3 is something else; not only is it his first major build, it's arguably his wildest car so far. The Z3 was spotted for sale in Florida, where Mark's brother happened to be vacationing, and so he helped Mark out and duly popped over to take look at it. It turned out to be a very clean example with just 20,000 miles on the clock and a Dinan supercharger to boot. A deal was done and the car was delivered to Mark's Michigan home where he could begin to enjoy it. "I never bored of driving this car," he says. "It was so easy to just drop the top and take it out for a cruise. Eventually, though, my craving for more power got the best of me and I started sending it out for major upgrades, eventually leading to its current state of tune. I also was into weight reduction mods and everything I did was kind of geared towards that. The roof, seats, wheels exhaust pretty much everything was weighed."

The supercharger was doing a good job on the power front but for the kind of figures that Mark wanted the engine needed to be pretty much stripped down and built from the ground up.





Top: Engine may not look special but the 800whp magic is hidden away beneath the surface; diffuser looks cool and was added for that very reason, along with bootlip spoiler



I'm not aware of another M Roadster producing more horsepower or torque

The car was handed over to the guys at ICS Performance, who know a thing or two about making fast, force induced BMWs and after chatting with head man, George Kakaletis, it was agreed that 600whp would be a good figure to aim for.

Unfortunately, ICS discovered two cracked piston ring lands, so Mark decided to go all out on the engine because that's what we as enthusiasts do when something breaks – we use it as an excuse to repair it but make it better at the same time.

The engine component list reads like a turbo build wish list and ICS really left no stone unturned when it came to creating this monster of a Z3. Inside the 3.2-litre S52 you'll find Mahle 9:1 compression triple-coated racing pistons, K1 forged con rods, ACL Racing bearings, titanium valve kit, springs and retainers and ICS Stage 1 performance camshafts. There's also a CES cut ring head gasket and ARP series 2000 head studs, while the Precision 4094R dual ball bearing turbo sits on an Otis tubular twin-scroll manifold with a Tial 60mm wastegate vented into the exhaust to keep things a little more civilized. You'll also find a Tial 50mm BOV, while the exhaust is custom-made.

To ensure that enough fuel makes it into the engine there are 80lb (840cc) injectors with both a Walbro 400 and Bosch 044 fuel pump,

running with an Aeromotive fuel filter and a custom fuel rail.

To help keep the engine cool in all conditions, a high flow aluminium BMW racing radiator has been fitted along with a VPD custom racing oil cooler and then there's the custom intercooler, measuring 610x305x102mm and squeezed in behind the front bumper.

It's one hell of a line-up and, unsurprisingly, it makes for some seriously heavy-hitting power figures. On 109 octane fuel at 1.8bar of boost on what Mark calls a fairly conservative tune, the Z3 made a spectacular 803whp and 776lb ft of torque at the wheels, and that's with the tyres spinning! "She probably makes a bit more," says Mark, "but who's counting? That wasn't my primary objective – after all it's just a street car. With a few upgrades, though, like a larger fuel line, bigger injectors, larger turbo, more boost and a more aggressive tune it could be closer to 1000hp but I have no interest in doing so as the car is already a handful to drive weighing in at only around 1250kg. Currently, I'm not aware of another M Roadster producing more horsepower or torque."

For Mark, this build wasn't just about power, it was about weight, too, and both the exterior and interior styling has been shaped by his desire to shave and shed weight wherever possible. There's a lightweight vented FG Racing bonnet, Recaro Pole Position seats mounted on lightweight aluminium brackets with Imola red leather centre sections to tie-in with the rest of the interior colour scheme, there are lighter UUC race pedals, the bumper weights have been removed along with the air-con, the sound deadening and Mark's fitted a lightweight Odyssey battery. Even the carpets are lightweight!

Mark has extended the Imola red colour scheme throughout the interior and it also appears on the badges. A rear spoiler and diffuser were also added as subtle cosmetic enhancements.

As far as the chassis is concerned, the Z3 has been fitted with a Ground Control adjustable Eibach spring kit, Koni



adjustable sport dampers, a Bavarian Autosport rear bush kit, IE Engineering rear camber/caster adjustment kit and a Randy Forbes rear axle reinforcement kit, along with a Rogue Engineering dual rear differential housing.

With so much power, you need a suitably powerful braking system on board and lurking behind the staggered 18" Work Meister SP1s you'll find a UUC/Wilwood front BBK with four-pot calipers and super-light 325mm discs, while at the back there are StopTech Z3 M cross-drilled discs with braided hoses and Axis Ultimate brake pads all round.

Mark's Roadster has been through various stages of development, with this last stage taking seven months. In that time it has gone from brisk to ballistic, with the kind of power figure that is actually hard to imagine. "The turbo system is my favourite modification on the whole car," he smiles, "as it's just so powerful. Being in such a lightweight car puts your eyes on stalks when you squeeze the throttle. I've not experienced acceleration quite like this before and I've been in some pretty fast cars." Mark has really ticked all the boxes with this project and built his ultimate Z3 and all that's left to do is just drive it and enjoy it. You know he will... ●

Vented bonnet looks the part, is lightweight and helps to keep underbonnet temperatures down



DATA FILE

ENGINE: 3.2-litre straight-six S52B32, Mahle 9:1 compression triple-coated racing pistons, K1 forged and coated connecting rods, ACL Racing coated rod and main bearings, titanium valve kit, springs and retainers, CES cut ring head gasket, ARP series 2000 11mm head studs, ICS Stage 1 custom performance camshafts, Precision 4094R DBB 1.06 A/R turbo, 610x305x102mm custom intercooler, custom intercooler shielding, Otis coated tubular twin scroll turbo manifold, M50 (OBD 1) intake manifold, custom turbo engine mount arm, Tial 60mm wastegate vented into exhaust, Tial 50 blow-off valve, 840cc fuel injectors, Walbro 400 and Bosch 044 inline fuel pumps, custom relay kit for fuel system with circuit breaker, Aeromotive fuel filter, custom fuel rail kit, RK Tunes custom tuning OBD 2, 3.5" HFM, welded oil pump nut, Dr. Vanos unit, BMW high-flow aluminium racing radiator, VPD custom racing oil cooler, custom 3.5"

exhaust with dual 3" Magnaflow silencers, Rogue Engineering racing engine mounts. 803whp and 776lb ft of torque at the wheels on 109 octane race fuel at 1.8bar.

TRANSMISSION: ZF Type-C five-speed manual gearbox, Rogue Engineering transmission mounts, Clutch Masters custom clutch, lightweight chromoly flywheel, 2.79:1 built differential with 40% lock up

CHASSIS: 8.5x18" (front) and 11x18" (rear) Work Meister SP1 wheels with 225/40 (front) and 285/30 (rear) Toyo R888 tyres, Ground Control adjustable Eibach spring kit (525lb front, 600lb rear), Koni yellow adjustable sport dampers, Randy Forbes rear axle reinforcement kit, Rogue Engineering dual rear differential housing, IE Engineering rear camber/caster adjust kit, Bavarian Autosport rear bushing kit, UUC/Wilwood BBK with

four-pot Wilwood calipers and Superlite 325mm floating cross-drilled discs (front), StopTech Z3 M cross-drilled discs (rear), Axis Ultimate brake pads and stainless steel brake lines all-round

EXTERIOR: FG Racing lightweight vented bonnet, rear bootlip spoiler, rear diffuser, bumper weights removed

INTERIOR: Recaro Pole Position racing seats with custom red matching inserts, Recaro lightweight aluminium side brackets and TC Kline floor mounts, AEM UEGO A/F gauge, SPA dual readout gauge (boost and fuel pressure), E Boost 2 electronic boost controller, Autometer dual gauge pod, Autometer mini shift light, TRM racing shift knob, UUC race pedals, lightweight carpeting, lightweight Odyssey battery, AC delete, sound deadening removed

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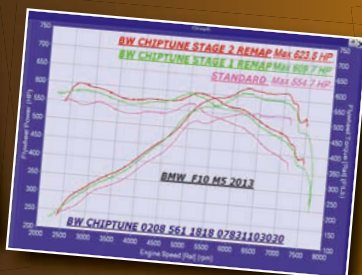
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A red BMW E30 is parked in a narrow alleyway between brick buildings. The car is the central focus, with its rear and side profile visible. The background shows the texture of the brick walls and a paved ground.

The CATuned E30s are among the best in the world; here's the final of the set, the S50-swapped Henna red example, which completes the patriotic red, white and blue trio.

Words: Ben Koflach
Photos: Courtney Cutchen

It's amazing how some cars can just fall by the wayside. Sure, we can all fall on hard times and cars can be an easy thing to push to one side but sometimes this abandonment becomes sacrilege. Luckily, though, one man's nuisance E30 is another man's perfect base for a project. US tuning house, CATuned, demonstrated this perfectly with this Henna-coloured car as it turned this classic 3 Series from a wreck into a car to be proud of.

When we say 'wreck', we mean it. This 1990 325i, which was originally Calypso red, came into CATuned's ownership with a snapped timing belt, an interior that was as good as gone, damaged bodywork and smashed lights. To many, it was destined for the scrapheap. Fortunately, CATuned front man, Igor Polishchuck, thought differently...

"It was bought four years ago at a donation auction," explained Igor. "I think I overpaid at the time, purchasing it for \$1200 but I wanted to get something bad to show what we can do. It needed everything: the engine was toast, the interior was a goner, and the paint was unrecognisable." After being rolled into the CATuned workshop, though, it would never look the same again.

IRON PATRIOT



"I chose the Henna red colour because I always liked it and since BMW never made a late model E30 in that colour I figured, why not?" Igor explained. Of course, before it was packed off to the bodyshop, Igor and his team had a few of their own touches to add. The E30 was stripped to its core, and the body was restored, along with a few tweaks. The damaged parts were stripped or repaired and a central windscreen wiper mount was welded in.

While the E30, now no more than a rolling shell, was away at the bodyshop, CATuned purchased a crashed 1995 E36 M3 in order to utilise its S50B30 heart in the E30. The 240hp US-spec lump was completely rebuilt with all new bearings, seals and gaskets, as well as an E34 sump to make it ready for the transplant. Reliable horsepower is hard to argue with, and this E30 was built with speed in mind.

Once the shell, now fully painted in the beautiful PPG Henna red hue you see here, was back at CATuned, the rebuild began. The glass was refitted with all new seals and surrounds, and the team also had Euro bumpers and trims prepared for the car to get rid of the US-spec 'diving board' pedestrian safety items. CATuned's own splitter was bolted to the bottom of an iS front lip; no stone was left unturned.

The original suspension was used to roll the car in and out of the bodyshop but beyond that its life was over. It was binned, with CATuned coilovers fitted in its place. Igor worked for a number of years

specifically designing and testing CATuned's suspension systems, and the guys have got it nailed. On this car you'll find full coilovers all-round with separately adjustable ride height and pre-load, along with 32-stage adjustable monotube dampers. They're perfect for on-road comfort and performance.

While they were at it every bush was replaced with polyurethane items, with a Z3 rack and Eibach anti-roll bars to boot.

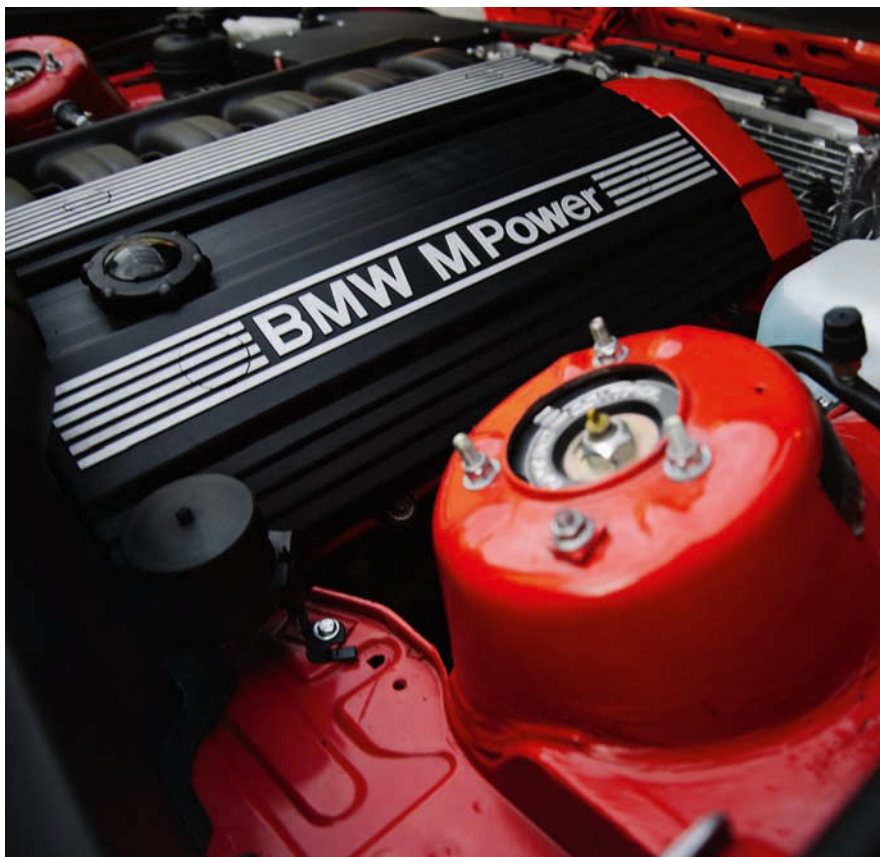
Everything was bolted back under the car along with new wheel bearings fitted, leaving just the brakes to do. For these, Igor used new OE rear calipers with ceramic pads and grooved discs. All new brake lines were run from front to rear, with the aging rubber flexi-hoses replaced by CATuned stainless steel braided items front and rear, as well as the clutch hose. Upgrading the braking at the front end – to match the planned horsepower – was done with a CATuned Stage 2 big brake kit. It's yet another product that Igor and his team have formulated over the years of building E30s and other classic BMWs; it comprises 285mm grooved discs and beefy four-piston Wilwood calipers.

The final addition to the chassis setup was, of course, the wheels. Igor had nothing but the best in mind, sourcing a set of BBS's timeless RSs for the E30. These were finished with white centres and polished dishes, measuring 8.5x16" ET6 up front and 9.5x16" ET6 at the rear, fitted with nicely stretched BF Goodrich rubber – perfect for



Interior has been treated to suede headlining, an M Tech 2 steering wheel and a pair of Monaco reclining front bucket seats





DATA FILE

ENGINE & TRANSMISSION: 3.0-litre straight-six S50B30 (fully rebuilt), Castro Motorsport intake, original BMW exhaust manifold and catalytic converters, custom rear exhaust system with Magnaflow muffler, Walbro 255lph fuel pump, Mishimoto alloy radiator with Rogue Engineering coolant hoses, Spal electric fan, custom A/C lines, Fidanza lightweight flywheel, polyurethane engine mounts, five-speed manual gearbox, UUC short shifter and dual-shear selector rod, polyurethane transmission mounts, 3.25 final drive ratio LSD with 60% lock

CHASSIS: 8.5x16" (front) and 9.5x16" (rear) BBS RS three-piece splits with 205/45 (front) and 225/45 (rear) BF Goodrich tyres, Motorsport Hardware wheel studs and nuts, Z3 steering rack, CATuned Motorsport steering coupling, CATuned full coilover conversion, Eibach anti-roll bars, reinforced trailing arms, CATuned front big brake kit (consisting of Wilwood calipers and 285mm slotted discs), slotted rear discs, ceramic rear pads, all new brake lines and CATuned braided hoses

EXTERIOR: Fully restored and repainted in PPG Henna red (originally Calypso red), Euro bumper conversion, single wiper conversion, iS front lip and sideskirts, CATuned splitter, glass sunroof, all new locks, yellowed Euro 'smiley' headlights

INTERIOR: Suede headlining, M Tech 2 steering wheel, Husco armrest, E46 ZHP gear knob, BMW Motorsport red seatbelts, custom stereo panel, German Car Audio rear sub box and amp box with all independent wiring, Fat Mat sound insulation throughout, Bavarian Restorations dash cluster, fully functional air conditioning

tucking up into those arches. As a finishing touch, Igor used Motorsport Hardware wheel studs to mount the wheels – what better way to promote your trade partners, after all?

With the chassis work done and the exterior well on the way, the CATuned crew began work on getting that freshly rebuilt S50 mounted up. It was treated to a Fidanza lightweight flywheel and a new OE clutch before being reunited with its partnering ZF five-speed gearbox and bolted into the little E30 using polyurethane swap mounts. The final step, ensuring that the S50 power could get down to the ground effectively, was a 3.25 final drive LSD, modified to have an aggressive 60% lock.

Of course, getting the engine bolted in was only half the story – there was a little more work to do before it would run. The front half of the exhaust system was left factory, with the rear half swapped for a custom stainless steel system with a Magnaflow muffler to keep things civilised.

Next up: cooling. As a distributor for Mishimoto's range of alloy cooling products, it was only natural that a Mishimoto radiator ended up in the car, plumbed-in with Rogue Engineering silicone hoses.

The occupants can be kept cool, too, which is vital in the California heat; the CATuned guys retained the S50's air conditioning pump and made custom lines to get it plumbed-in and fully functional.

A Walbro 225lph fuel pump feeds the S50 with juice through all-new fuel lines, while the CATuned guys got everything neatly

wired in. Until recently the S50 was supercharged, using a VF Engineering system to deliver a hefty 350hp hit. However, this has been removed for the time being and even a normally aspirated S50 in a lightweight E30 is still pretty potent. There was talk of going turbo with the car but for now a Castro intake does a fine job of getting fresh air into the lump. Igor estimates that it's making about 250hp.

With the running gear sorted, CATuned just needed to finish the interior in order to complete the project. Fortunately CATuned is an expert in doing interiors. A full black leather rear half was sourced, with Monaco reclining front buckets and red BMW Motorsport seat belts. A suede-rimmed M Tech 2 steering wheel, custom Bavarian Restorations dash cluster and genuine BMW floor mats finish it off nicely.

The sound system was given a boost, too. The entire interior has been treated to Fat Mat sound insulation, with a German Car Audio boot box housing an Infinity amp and sub, all custom wired in.

CATuned's third and final E30 demonstrates a different take on the classic 3 Series to the 'Miss blue' and Alpine white M Tech 1 cars that you'll have seen previously in the magazine. An updated powerplant and a thorough chassis upgrade give it some serious performance yet it retains all the classic cool of the late model E30 that it started out life as. This E30 hasn't just been rescued from the scrapheap – it's been completely reborn as an entirely new creation ●

Three-piece RSs have been finished with polished lips and white centres; Motorsport door handles add the finishing touch





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Striking in Atlantis blue,
this E46 M3 delivers as
complete a package as
you could ever want.

Words: Elizabeth de Latour
Photos: Sunny Ryait

A high-angle photograph of a blue car parked on a cracked concrete street. The car is on the left side of the frame, with its rear and side visible. The street is made of grey concrete with several cracks and a square manhole cover. A brick curb runs along the right side of the street. The text "THE COLOUR OF MAGIC" is overlaid in large, bold, blue letters, slanted diagonally across the lower half of the image.

THE COLOUR OF MAGIC

Cast your mind back to cars of the '70s (or pictures of them if, like me, you weren't alive back then). While there did seem to be a lot of gold and brown going on, there was also a lot of colour and it seemed that both people and manufacturers were much braver when it came to the hue of their motors. And we don't mean wild colours for wild cars, like the American muscle cars of the time; we're talking about things like Inca orange on 02s and Taiga green on E12s. Okay, the Valencia orange 1 Series is most definitely a thing (I drive one myself) but can you imagine a green F10? It is, therefore, rather refreshing to discover cars that aren't shy about standing out and owners that aren't shy about owning them.

And that leads us nicely to Nadeem Ahmed and his E46 M3. It's Atlantis blue, we all know it's Atlantis blue but really it's turquoise. Tell someone you drive a turquoise car and you'll probably meet with a reaction of raised eyebrows and a polite but slightly hesitant and questioning 'Oh...?' Tell a BMW enthusiast that you've got an Atlantis M3 and you'll probably get a nod of the head, a lightly pursed lip of approval and a 'Yeah, nice.' In fact, you might be looking at Nadeem's E46 M3 and thinking exactly that because it is very nice. And that Atlantis blue exterior is wrapped around an equally nice interior. It's always a bit disappointing to peer into a sexy car and be greeted by a vast expanse of black leather. Fine if you like that sort of thing but it's a bit, well, dour. But Nadeem's E46 M3 is rocking an interior bursting with creamy goodness and it offers the perfect calming antidote to the striking exterior.

Considering this car represents one quarter of his current BMW crop, he's poured as much love into it as you might expect someone running one as a solo project to do. Nadeem bought his first BMW, a '98 318i, from a rude dealer to prove a point but despite the unfortunate circumstances, the BMW ticked all the boxes it needed to and a string of Bavarian metal followed, including this one, which was an impulse buy. As far as impulse buys go, that's pretty impressive. "I'd always said that if I ever found a manual Atlantis blue E46 M3 with a Champagne interior, I would buy it," he explains. "One day I was just going through *Auto Trader* for no particular reason and I found it! It was only described as blue and from the pictures I was guessing it was Atlantis and that was enough for me to start a three-hour road trip which resulted in me sealing the deal!"

Colour aside, the car wasn't in great shape. It had resided in a village in the middle of nowhere and clearly hadn't been looked after but the engine was sound, a big bonus and even the tiny crack in the rear subframe that was discovered during a pre-

"I'd always said that if I ever found a manual Atlantis blue E46 M3 with a Champagne interior, I would buy it"



purchase inspection that Nadeem insisted on wasn't enough to put him off. "It was such a rare car with all factory options (including a rear electric sunblind) that I decided to buy the car and hoped I would get a good will repair from BMW for the subframe... which I did eventually!"

Car purchased, he embarked on an impressively comprehensive tuning programme covering pretty much every aspect of the M3. Nadeem began with some styling modifications, fitting OEM LED rear lights, smoked front Depo indicators and new Bosch headlight lenses himself. Next on the list was a Meisterschaft exhaust with DTM tips and a set of BMW Performance six-pot front calipers mated to CSL discs and braided brake lines, with a set of Brembo four-pot rear calipers added later on and sprayed yellow to match the fronts. He's had the side repeaters removed and replaced with LED indicator strips and added illuminated M3 badges on the side vents.

On the suspension front you'll find a set of PSS9 coilovers, refurbished by Bilstein prior to being fitted, which offer plenty of adjustment for both damping and ride

height. And the M3's ample arches were filled with a set of rather rare rims. "I have always favoured AC Schnitzer alloys," he explains, "but I chose the Racing Dynamics alloys this time because of their rarity. As I had an individual M3 in a rare colour, I also wanted it to have alloys which you would hardly see on any other car, and the staggered setup with really deep rear dishes was perfect. I purchased them from the wheel man himself, Raj of Fullhouse Customs; however, when Dips from Custom Cars was refurbishing them prior to giving them to me, he found out that one alloy had a buckle in it. Raj offered me a full refund but I decided to keep them as I would never find another set (I've still not seen another set!). I had the wheel professionally repaired by a company in High Wycombe and I'm absolutely over the moon with them." Indeed, the 19" Racing Dynamics RD2s are very rare on pretty much anything and trying to find a set is a venture that requires time, patience and money. The RD2s look great on the E46 M3, with lots more dish than you might expect from a single-piece wheel and the Dolphin grey centres are a nice touch.



DATA FILE

ENGINE & TRANSMISSION: 3.2-litre straight-six S54B32, GruppeM induction kit, Meisterschaft exhaust with DTM tips. Six-speed manual gearbox with AC Schnitzer short-shift and UUC DSSR, Driftworks lightweight flywheel

CHASSIS: 8x19" (front) and 11x19" (rear) Racing Dynamics RD2 alloys with 225/40 (front) and 255/35 (rear) Continental tyres. Bilstein PSS9 coilovers, H&R anti-roll bars (front and rear), BMW Performance six-pot front calipers with custom brackets, CSL discs, braided brake lines, Porsche Boxster four-pot Brembo rear calipers with custom brackets, new discs, braided brake lines

EXTERIOR: Full respray, carbon fibre CSL bootlid with exposed carbon fibre lip blended in, CSL carbon fibre diffuser blended in, carbon fibre Vorsteiner side skirts

blended in with Phoenix yellow coloured mesh at the ends, front bumper fitted with Hamann-style foglight covers, full length CSL carbon fibre lip blended in, side repeaters deleted and replaced with LED strip indicators in side vents with custom-made illuminated M3 badges, OEM LED rear light conversion, smoke tinted windows all-round

INTERIOR: Front Recaro Sportster CS seats, full LED lighting conversion, Intravee and Alpine system, Storm Motorwerks titanium gear knob and sat nav buttons

THANKS: Dips at Custom Cars, Raj at Full House Customs, Kashif for all the help with the brakes, Dino and Richard aka Bikeracer for the custom caliper brackets, my wife for putting up with my modding madness and my son Yusuf for his enthusiasm and love of the M3





The wheels measure 9" wide up front and a beefy 11" at the rear but the E46 M3 arches were capacious enough to see Nadeem chuck a set of 15mm spacers up front and 12mm ones at the rear to bring them out and give the car a nice aggressive stance.

We've already touched on the interior, so let's go back and touch it some more. The Champagne leather was already there, and Nadeem has spiced things up with the addition of a pair of extremely sexy Recaro Sportster CS seats, which add a real sense of drama to proceedings. The standard M3 seats are really good, no question about it, but you can always go one better and if you can throw in something that's going to get some attention, then why not? "The interior was easy," he says. "I had decided on OEM CSL seats but they are hard to come by, so I found a set of Recaro Sportster CS seats from a Lotus dealer who was closing down and had some Lotus Evora bits to offload! So I ordered up some Macht Schnell side mounts and got the seats trimmed to match the

Champagne interior. I love them!" In addition to the seats there's a full LED lighting conversion, an Intravee and Alpine system for iPod compatibility and a Storm Motorwerks titanium gear knob and matching sat nav buttons.

After the initial flurry of mods, Nadeem handed the car over to Dips at Custom Cars to take things up a notch. The car received a full same-colour respray to get it looking fresh as the Dickens, though there were some problems, as Nadeem explains: "Dips told me that my car had every shade of Atlantis blue on the panels and we had to decide which shade to respray the car in. He eventually discovered that the Bluetooth shark fin on the roof was the only bit with the original shade and that was used to choose the respray colour shade!" A CSL bootlid was fitted with the lip blended in to expose a strip of carbon fibre. Hamann-style front foglight surrounds were also fitted and filled in for a CSL/Vorsteiner look. A CSL carbon splitter was fitted and blended in,

exposing just a sliver of carbon fibre as with the boot and was joined by a set of Vorsteiner carbon skirts as well as a CSL carbon diffuser and a set of H&R anti-roll bars to further sharpen the handling plus an AC Schnitzer short-shift with UUC DDSR.

It's taken Nadeem two years to get to this stage and while you might think that he's happy with where the car is at, his long list of mods he wishes he could do and the ones he's still planning on doing say otherwise. "I am planning on getting Dips to fit a Champagne extended leather dashboard which I already have, some three-piece 19" Racing Dynamics RS2s with copper dishes and copper bolts (deeper dishes are currently being custom-made in the USA for these), an Evolve carbon air box with the remap and a resonated Supersprint centre pipe... and then I think I might be done!" These plans will push what is already an eye-catching and impressively modified M3 to the next level and it sounds like it's going to be a stunning machine ●





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E30 *WHISPERER*

After fiddling with a few E30s some blokes feel justified in calling themselves 'Mr E30'. Paul Issepon is not one of those guys. He is the 'E30 Whisperer'.

Words and photos: Ben Dillon



“ s it ‘da dada da da da’, or more like ‘dada da da dada?’” Paul Issepon asks, stone-faced and serious as he counts out the beats of two different mechanical cadences,

each eerily mimicking a rough running M20 as he tries, telepathically, to diagnose what is wrong with my E30, which is 20 miles away in my garage. I want to laugh but I’ve never heard anyone so accurately verbalise a lumpy BMW six-pot before, so I fail to pick which aural signature my own broken-arse M20 is pumping out. But so entrancing is Paul’s Bavarian chant that I know if I could identify the pattern, he’d be able to pinpoint the problem immediately as he is, most definitely, an E30 whisperer.

Shrugging away both my awe and ignorance Paul moves onto other subjects – all E30-shaped, a passion which has consumed him since the car was released in 1983. Seeking the man out at his hilltop hermitage in Brisbane, Australia reveals the depth of his love for BMW’s most iconic three-box. No less than ten complete and running E30s are stashed away in various corners of his yard and garage with a further unspecified number earning a living as parts cars for anyone in need of E30 bits. From the family 325i Saloon to a 325i Convertible, a clutch of coupés and other chrome and plastic bumper iterations ranging in flavours from 318i to 325i (but no 320i variants, “all the thirst of a 325i with the power of a 318i, they suck,” Paul says), Paul has an E30 for every season and every day of the week. But it’s the contents of a shabby wooden garage that looks ready to collapse that we have come to see.

“You want to see something special?” Paul says as we walk past a near immaculate 318iS undergoing Paul’s perfectionist scrutineering. Opening a creaking wooden doors reveals an E30 which is obviously something exceptional from the moment outside light falls across it. “This is my baby,” Paul murmurs. A first glance reveals an M Tech 2 bodykit hugging the familiar shape of an Anthracite E30 with Hockenheim-style 16-inch rims lounging in an aggressive stance that indicates some serious ability through the twisties. Looking further under the car sees a big diameter bi-modal exhaust system and finned diff showing that this car has the fireworks to match the finesse. But it’s the ‘2.6’ badge on the rump that causes the most furrowed brows. “The engine was built by Ludwig Finauer, a BMW race engine guy, using a 325i block and (885) head but with a 323i crank,” Paul explains. “So that makes it a 2.6-litre engine, that’s why it’s got the badge”.

Ludwig Finauer was more than just your average spanner twirler, though, he was the mechanical mastermind behind the BMW factory team in the Australian Touring Car Championships (ATCC) during the 1980s when the team ran E24 635CSi and later E30 M3 cars against the home-grown V8 Ford



DATA FILE

ENGINE & TRANSMISSION: 2.6-litre straight-six M20B26, 325i head and block, 323i crank, Garrett T05/03 turbocharger, water/methanol injection, Haltech Platinum 1000 ECU, 325i oil cooler, Bosch yellow injectors, Getrag 260 gearbox, lightened flywheel, performance clutch, 3.73 LSD diff with E30 M3 finned cover

CHASSIS: 8x16" (front and rear) wheels with 215/45 (front and rear) Kumho KU36 semi-slicks, BC Racing

coilovers, Hartge strut braces, Mazda RX-7 Brembo four-piston calipers and slotted and dimpled rotors (front), slotted rotors single-piston calipers (rear), Hawk pads, braided lines

EXTERIOR: M Tech 2 bodykit

INTERIOR: BMW sports leather seats, Alpina steering wheel, Alpina vent gauge, Boost air-fuel and intercooler temperature gauges

and Holden crews. Headed by ex-Formula One legend Frank Gardner, the team had top-drawer local and imported talent for various races including 1967 Formula One champ Denny Hulme and even Finauer himself steering an M3 for a few rounds in 1987 including a drive in Australia's biggest race, the Bathurst 1000.

But fast E30s for the road were Finauer's thing with star BMW team driver Kevin Bartlett commissioning one for his personal transport. Finauer promptly raided the race team's parts bin with the result being a chrome-bumper Atlantisblau coupé with a Lysholm screw-type supercharger strapped on to the Finauer signature 325i/323i combo with body and drivetrain options cherry-picked from BMW M division in Germany. Bartlett now had a serious street weapon not

all that different from his weekend drive.

The car eventually found its way into private hands, going through a succession of owners until 2003 when a friend of Paul's, Allan Forbes, stumbled across an advert for the car. "I've always loved E30s, they are a great car; fun, quick, they handle really well. They're a good looking car, too, so when I saw it advertised for AU\$8000 (£3300) I had to have it," Allan says. Allan drove the car for about a year before writing it off in an accident. He then bought the wreck back from the insurance company to harvest all the special interior bits for his next E30 and sold what was left of the wreck to Paul who took the Finauer-built driveline and slotted it into a one-owner E30 M Tech 2 body which evolved into the car you see on these pages.

Paul's inspiration behind the project was

to turn his dream of the ultimate M20-powered E30 into a driveable reality, and by engineering solutions and doing all of the work himself, have complete ownership of the transformation. The body and drivetrain were stripped down, with every part of the car rebuilt and/or modified to suit Paul's aim of E30-godliness with attention lavished everywhere and as much focus on performance as on looks and usability.

The Finauer engine was pulled apart, inspected, given a refresh with new bearings and gaskets while balanced standard pistons and rods were kept as they could easily handle the addition of 15psi of boost that Paul was planning. The induction side features a custom heat-shielded inlet to an M20B20 inlet manifold which is a curious choice but one which Paul stands by for



helping the T05/03 hybrid Garrett turbo to spool quickly. This along with water/methanol injection and a front mounted intercooler helps to keep inlet temps down while general engine cooling is supported by a custom radiator and an oil cooler and catch-can setup. Custom extractors feed the turbo and expel gases on the hot side of the engine with a Turbosmart wastegate to vent boost when needed. The back end of the 2.5-inch twin system features a bi-modal exhaust valve operated by a solenoid at 3psi, helping the car remain somewhat stealthy in suburbia.

Those with a keen eye might notice the distributor in the block, much like a Series 1 E30. "The bottom of the distributor is M20 BMW and the top is Series 6 RX-7 because the triggering and the home signal for the Haltech love to be in the same spot," Paul explains. "Everyone loves the RX-7 distributor so I thought I'd marry one onto an M20 shaft." This combined with a single coil-pack feeds sparks via the cam-driven

distributor while a Walbro 255 in-tank pump and rising rate regulator start the fire inside the 2.6-litre Finauer six. "It's easily a 12-second (quarter-mile) car, maybe even 11s," Paul says. "It's got an LSD diff, sticky tyres and good suspension so instead of spinning the wheels it just goes forward fast."

Handling and stopping performance weren't overlooked either with BC Racing coilovers and Mazda Series 6 RX-7 slotted and dimpled discs squeezed by Brembo four-piston calipers up front with a slotted disc, single-piston setup on the rear.

Inside and out styling cues are varied with genuine M Tech, Alpina and Hartge components sitting in a comfortable mélange of E30-ness. The M Tech 2 bodykit, spoiler and leather sport seats combine with the Alpina steering wheel and vent gauge inside to make a cosy habitat for the driver while Hartge strut braces front and rear tighten up handling. Under the bonnet the rocker cover is a Hartge item with the logo machined off and replaced with that of BM Conversions –

Ludwig Finauer's now defunct Sydney-based BMW hot-rod shop, Finauer himself having long since retired to a coastal village somewhere south of Sydney.

The result of Paul's hard work is not the most outlandish E30, or the fastest, but it is one of the most complete performance cars in the E30 community Down Under and we think he's more than surpassed his aim to build the ultimate E30 combining all the merits of the original design but adding 'more of everything'.

The final twist is that after enjoying the car for a couple of years since completing the build, Paul has now sold the car to Allan – in a way returning the driveline at least to the person he got it from. After our photoshoot finishes Paul offers to 'swap back' the 326i for his very worked E31 840i. Allan declines with a smile and as Paul and I watch the 326i disappear into the distance I'm sure I hear the E30 Whisperer sigh. Nothing twangs the heartstrings harder than someone else driving 'your' E30 ●





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HARD EIGHT

Jonas Larsson's home-built 140i is a serious piece of kit. It retains the Pixar grin of the 1 Series' face but don't let that fool you – this car is very angry indeed.

Words: Daniel Bevis Photos: Hjalmar van Hoek



Motor racing is a complicated thing. If you want to build a fast car and then pit it against other fast cars on track, it's not just a case of nailing the thing together, getting your race licence and then showing up on the day with a helmet in your bag and eagerness in your heart. There are rules and regulations to be adhered to; strict mandates that ensure safety, parity, fairness, the appeasement of sponsors, all sorts... look at Formula One, for example. In days of yore, there were all manner of chassis, engine and aero configurations battling on the same grid, but there's a reason today's F1 cars all look roughly the same and post roughly similar lap times at any given venue: the rules. Nose cones have

to be a specific height. Exhaust outlets have to be a specific distance from diffusers. Race cars are built for individual race series – that's why you don't see Le Mans streamliners on the grid at Monaco or BTCC racers on rally special stages.

There is a notable exception, however. A race series in which the rules are effectively 'build a fast car, then see if you can post a faster lap time than everybody else'. That series is Time Attack.

You've heard of it, right? But if you're unfamiliar with the story behind the name, a quick history lesson: Time Attack grew from Japanese circuit racers of the 1960s, that were built to celebrate the art of the aftermarket tuner; the doors were open to everyone from low-budget home-spannerers

to big-bucks corporate showcases, with everyone racing on, as it were, a level playing field. This is very much the ethos of the series today. You just need to start with a production car as a project base, and then the tuning potential is limitless. Throw in a load of horsepower, tinker with the chassis and drivetrain, develop some custom aero, do whatever it takes to make the car as fast as it can physically be.

Time Attack today exists in numerous series across the globe, with competitors bracketed into various groups; 'Clubman', for instance, is a UK class for cars with basic modifications – roll-cages are merely 'recommended'... the ladder climbs through 'Club Challenge', 'Club Pro', 'Pro' and 'Pro Extreme', with the cars getting incrementally



madder as you go. In essence, then, Time Attack is the dream series for aftermarket tuners. You can do pretty much what you like to the car without having to worry about a governing body disqualifying you for running the wrong thickness of head gasket or a frowned-upon diameter of air intake.

It follows that cars built for this series tend to be somewhat on the bonkers side. Take a look at this 1 Series, for instance: it's very wide, it's squatting aggressively... oh, and there's a V8 in there. Fun, huh?

So, why a 1 Series? And specifically, why an E81? Sure, the 130i was pretty quick, but on the whole isn't it a hatchback more suited to the school run and the supermarket car park? And this particular one rolled off the production line as a 116i –

120hp-odd and, in the eyes of the purists, a paucity of cylinders. What manner of lunacy is this?

Well, 'lunacy' is the key notion here, of course. "I've always liked the 1 Series," says Jonas Larsson, the man behind the project. "I bought a 120d in 2006 and used it happily as a daily-driver. This 116i is a 2008 model that I bought in Germany back in 2011. It was in good condition when I bought it, but I knew all the way from the beginning that this was going to be a total rebuild into a full-on Nordic Time Attack car." Having got the thing back to Sweden, that's exactly what he set about doing, and there certainly weren't going to be any half measures. What Jonas had in mind was to build a 140i and, as aficionados of Bavarian nomenclature

may deduce, that involves replacing the asthmatic four-pot with an engine whose displacement figure begins with a four.

Now, this isn't just a case of a man being led to derangement by a contaminant in the Swedish water, or railing against the suppression of everyday horsepower by going off on an extreme modifying tangent – he has form with this sort of thing. "I've been interested in cars for as long as I can remember," he explains, with the ease of a campfire cowboy reeling off his list of lassoing techniques. "I have had quite a few cars, from Alfa Romeos to a BMW M235i, most of them with small modifications... except my Porsche 968CS, which I built specifically for racing, and I drove in the Porsche Sports Cup." So none of this should



be too much of a surprise. But we were talking about that engine, weren't we?

"My plan from the beginning was to fit an E92 M3 engine," Jonas states matter-of-factly, as if that's a perfectly normal thing to say. This is a motor, remember, that offers a meaty 4.0-litres of displacement from its bent-eight configuration, with the bald figure in its native 3 Series environment being well north of 400hp – rather a lot more than you'd expect from a 1 Series.

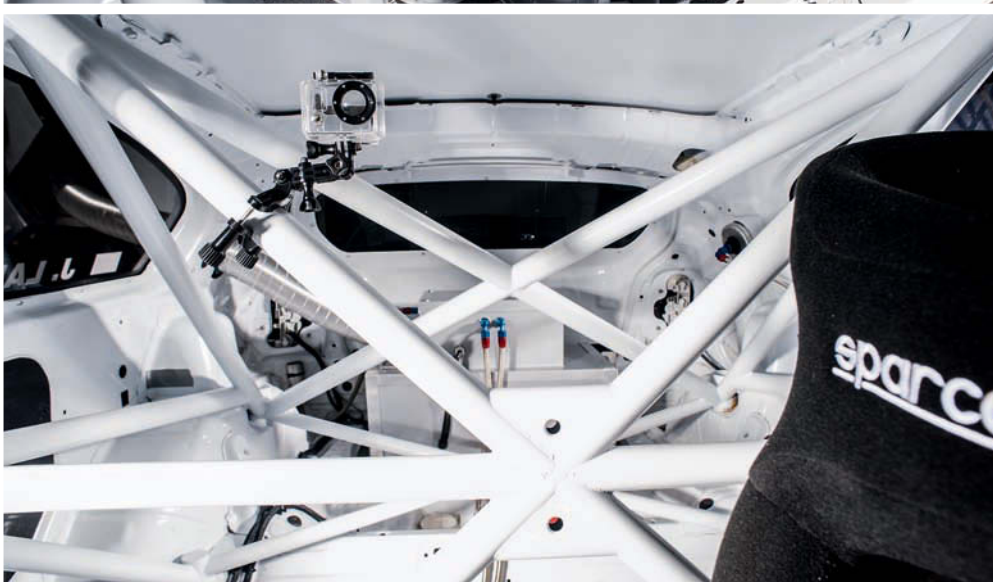
"I bought the engine from a scrapyards," he says. "It was easy to fit the M3 engine in the 1 Series, as it uses the same fastening spots." There you go then, a bit of inspiration for all you hatchback drivers out there. Sorry for saying you had a shopping car – find a written-off E92 and prove me wrong.

"At that point," he continues, "I embarked upon a total tear-down to rebuild the thing from the ground up as a race car."

He's not kidding. The first thing you'd probably notice about Jonas's 140i is that it's quite wide. That, in fact, is something of an understatement – if you were to see this parked alongside a bone-stock 116i, you'd see just how much this car has ballooned in muscularity. Those obscenely broad wings and arches are made from carbon-fibre, employed both for its strength and its lightness, and they just about stretch over the 9.5"-wide BBS M3 GT4 race wheels with their fat, sticky slicks. "The doors are carbon-fibre, too," says Jonas. "And the bonnet, and the tailgate. And the doorcards and centre console inside. And the windows

are Perspex. And..." Yes, well, you get the idea – he's put quite a lot of effort into shearing off as many kilos as possible from this racy little brawler. If you think the idea of shoving an M3 V8 into a 116i is game for a laugh, imagine what'd happen if you stripped all the weight out as well. Hilarity, that's what.

There are many other elements to consider in such a build, naturally, and the openness of Time Attack again proves its helpfulness when you start to pick over Jonas' chassis. Lurking behind those racy BBS rims we find the brakes from that E92 donor at the rear, with even beefier PFC items up front clamping 378mm discs. The whole shooting match is suspended by a snappily-named setup from Intrax: the XXL



DATA FILE

ENGINE & TRANSMISSION: 4.0-litre V8 S65B40, locked Vanos, Motec M84 ECU, 420hp+, E92 M3 ZF Type-G six-speed manual gearbox

CHASSIS: 9.5x18" (front and rear) BBS M3 GT4 wheels with 250/650 (front and rear) Yokohama slicks, Intrax XXL Black Titan 1K2 coilovers with 'Anti-Roll Control', PFC 378mm front brakes, E92 M3 rear brakes, AP Racing air jacks

EXTERIOR: Full carbon-fibre wide-body kit, carbon-fibre doors, bonnet and tailgate, Perspex windows, tailgate wing, race fuel filler

INTERIOR: Motec dash, Sparco Circuit seat, Sparco steering wheel, OBP pedalbox, KBT Safety roll-cage, carbon-fibre doorcards and centre console

THANKS: Köhler Racing, Daniel Hermansson, and my friends and family

Black Titan 1K2. This really is world-class stuff; Intrax is a Dutch suspension specialist who has as much of a hand in F1 development as it does in the street car aftermarket. The 1K2 is a strong, lightweight model with optimal cooling – ideal for racing, then – with a low-friction coating on the rods, as well as spring rate adjusters and ‘Anti-Roll Control’, which is frankly some sort of witchcraft that manages to combine road-car suppleness with race-spec retardation of lateral and longitudinal roll. How it does it is anyone’s guess. It acts as a metaphor for the whole car, really – extremely clever, with a sizeable dollop of ‘I’m sorry, how...?’

It goes without saying that the interior is suitably Stig-friendly, too. Shorn of all but the most necessary ingredients, the

lightweight Sparco bucket is joined by a hardcore roll-cage from KBT Safety, the pure-white atmosphere being an oasis of calm that reflects the sobriety of the exterior hue, utterly belying the furious grunt of the V8. It really is a very surprising little car.

Arguably the coolest feature of this build, however, is how mental it isn’t. That’s right, isn’t. While it is indisputably a mad and rocket-up-the-bottom-ish creation, it stands rather soberly alongside the sort of thing that you find when you type ‘Time Attack’ into Google Images. There’s no bonnet-mounted aerofoil here, no ankle-lacerating canards or aggressively hacked-out diffusers. That carbon-fibre bodywork is a work of art, and this is largely down to how it mimics the form of the original while

upscaling it by 20% or so, rather than morphing it into some kind of spaceship. Aesthetically, less is more; mechanically, more is way more.

“Ayrton Senna is my idol,” Jonas deadpans, sounding like Kimi Räikkönen in his seriousness, “and my personal goal is simply ‘be faster’”. As such, this car is always developing. Since the photoshoot I’ve fitted a bigger rear wing, and swapped out the M3 transmission for a Tractive six-speed sequential ‘box. The Motec electrical system has been totally overhauled, too.” Blimey, he just can’t leave it alone, can he? This is exactly the sort of perfectionism and innovation that Time Attack encourages – obsessive enthusiasts relentlessly fiddling and honing to eke further tenths out of their pride-and-joy builds. Long may it continue ●



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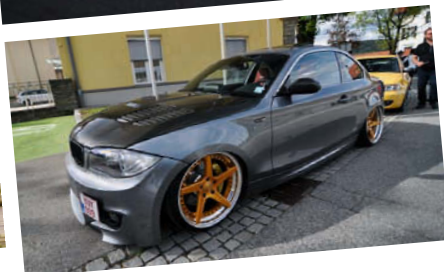
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Above & Left Got dish? This M3 definitely has; bagged 1 Series Coupé on VIP Modular VR15s



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Left & Above Mental Twoface wheels from mbDesign GmbH on this M6; beautiful bagged Bavaria



Above & Right Blistered arches and crazy-wide Rotiforms on this M3; Buni's PBMW-featured air-ride wagon on striking Rotiform LHRs





Above & Right PBMW photography regular Kewve has gone to town on his latest build – feature coming very soon on this awesome E30



Above & Left Feel the E34 love; are those stepped-up BBS RSs we spy?



It might have a rep as being primarily a VW show but Austria's annual car-fest is big enough to bring the BMWs out as well.

Words: Elizabeth de Latour Photos: Seb Moi, Vitek Trojanm, Joey Gordon

The annual Wörthersee show, held on the shores of Lake Wörthersee in May, is a massive event that every year attracts 1000s of cars from all across Europe for four days of car-based fun, though people actually turn up two to three weeks before the actual main event to be able to enjoy the cars without the vast crowds that accompany the event.

Wörthersee Treffen has been happening every since 1981 and over those 34 years it has grown

exponentially, becoming what must surely be the biggest European car event in the world.

While the show still most definitely caters more for the VAG-side of the modified scene, every year more and more BMWs are making the pilgrimage to Austria to take part in the festivities. This year was no exception, with a fine selection making an appearance over the course of the event. Austria might seem like a bit of a trek but if you love cars you owe it to yourself to experience Wörthersee at least once, you won't be disappointed ●



GAZ SHOCKS BMW COMPACT CUP ROUND 2 BRANDS HATCH

Although not as wet as it had been at Donington, inclement weather again greeted the Compact Cup racers for round two at Brands Hatch. 44 smartly turned out cars were racing, so the field was split into three groups to contest three races.

Words and photos: James Foard

QUALIFYING

The 44 cars were split into two groups for qualifying; even so, space to get a good lap in was at a premium. After two frenetic 15-minute sessions, it was Mike Tovey who came out on top. What made this all the more impressive was that Tovey was

in group one, which encountered worse track conditions than those in group two and the next driver from this group, Josh Harvey, could only manage 11th overall. Therefore second to tenth on the grid all came from group two, which was headed by championship leader Steve Roberts, his time

only three hundredths of a second behind Tovey. Next up it was Ian Jones in third, Paul Hinson in fourth, former Ginetta Junior podium finisher Ben Pearson was fifth and Richard Miles rounded out the top six. James Gornall was caught out by the poor conditions and was only 12th fastest overall.

RACE 1

- 1 Steve Roberts
- 2 Owen Hunter
- 3 Ian Jones

Fastest Lap:
Owen Hunter (1:00.53)



The first race saw an all RAW Motorsport front row of Jones and Roberts, followed by Pearson and Miles on row two, with Owen Hunter and former Clio Cup racer James Nutbrown completing row three. At the start, the front row got away cleanly despite the damp and greasy conditions, with Jones leading Roberts. However, behind them Pearson was slow away and got swamped off the start. Heading into Paddock Hill bend he was then tagged by the fast-starting Jonathon Davis which sent them both spinning. Miraculously the following pack somehow

managed to avoid them, although some were heavily delayed as they had to take avoidance action through the gravel. Back at the front, Jones was under pressure from Roberts and going through the last corner Jones ran wide, which allowed Roberts to take the lead as they started lap two. Owen Hunter was now in third position after the dramas at the start, with Richard Miles close behind in fourth. By the end of lap two James Gornall and Josh Harvey were up into fifth and sixth from row four on the grid. These front-runners remained nose to tail for the entire race, as

the greasy conditions made it difficult to go offline to overtake. The only change in position came when Jones had a massive sideways slide through Paddock Hill bend! Flirting with the edge of the gravel trap, he managed to keep his Compact facing in the right direction, but Hunter was past into second place, Jones down to third. Jonathan Davis was now fighting his way back up the field from the first lap spin, when he had his own sideways moment through Paddock Hill and ended up beached in the gravel, bringing out the red flag a few minutes early.

RACE 2

- 1 Mike Tovey
- 2 James Gornall
- 3 David Drinkwater

Fastest Lap:
James Gornall (1:01.54)



The drizzle continued to fall and the track was now even slippier! It was another all RAW Motorsport front row, with Mike Tovey and Ian Jones. Row two comprised Richard Miles and Paul Hinson, with James Nutbrown and David Drinkwater in row three. James Gornall and Simon Roche made up row four. As the lights went out Tovey made the best start to head the field. Despite wheelspin on the damp surface Jones and Hinson stayed in second and third. Miles and Nutbrown, however, had challenging starts and fell back to seventh and twelfth respectively. Conversely Roche made a fantastic start on the outside and rocketed up the order into

fourth, with Drinkwater and Gornall close behind in fifth and sixth. After some close racing, Gornall made his move stick on lap five to claim fifth from Drinkwater and with his lights ablaze Gornall was now the fastest man on track. Drama was to then strike the cars in second, third and fourth on lap eight. First Ian Jones suffered head gasket failure putting him out of second place. Then, a few corners later, Hinson put a wheel on the wet curbing while exiting Graham Hill bend, sliding across the track. As he caught the slide, momentum took over and the Compact's rear end swung back the other way, catching out the unfortunate Simon

Roche, who had to take evasive action on the wet grass. This led to a hefty impact with the tyre wall. Nevertheless, both were able to rejoin the race and Hinson finished in seventh and Roche in 13th. Back at the front, Tovey was now struggling with a slight MAF sensor issue which was hampering his straight line performance, so Gornall, now in second, was able to close right in on the Bristolian. At the chequered flag, Tovey held on to his first win in the Compact Cup, the gap between the two a mere 0.07 seconds. Completing the podium was David Drinkwater, with Miles and Simon Wood, who'd made progress from 13th on the grid, in fourth and fifth.

RACE 3

- 1 Steve Roberts
- 2 Mike Tovey
- 3 Paul Hinson

Fastest Lap/Lap Record:
Roberts & Tovey (57.97 secs)



Mike Tovey was again on pole ahead of his team-mate Steve Roberts. On the next row it was Paul Hinson and Ben Pearson, followed by David Drinkwater and Owen Hunter. Roberts got away well from second on the grid to head the field into Paddock Hill bend. Behind it was Tovey, Hinson, Pearson and Hunter. The main mover on lap one was Drinkwater who missed a gear off the start and dropped down the field. Roberts and Tovey then began to pull away, lighting up the timing screen as they began trading lap

records. Hinson spent the entire race defending hard from Pearson and then Hunter until Hunter got past on lap six. Jonathon Davis then joined the back of this group to make it a four-car fight for third. Despite several sideways moments and slight contact, the order remained the same and Hinson hung on to third, with Hunter, Pearson and Davis following closely behind. Roberts effectively secured the win when Tovey had a big slide at Paddock Hill bend and was unable to recover the couple of seconds lost.

NEXT ROUND

.....

The Compacts will head north to Croft for the next round. The top of the table is still close, although after his successful weekend, Mike Tovey now moves into second in the points behind his RAW Motorsport team-mate Steve Roberts. Excitingly I will be joining the grid for the Croft round, although with a new circuit and car, I expect it will be a very steep learning curve! ●



2015 PLAYERS CLASSIC



Below: Diablo wheels on a BM? Hell yes; awesome Z4 Coupé on Daytonas; Guy Higg's great S50-swapped E30

Below: We were loving this E36 on dishy BBS RFs; Becky Evans; E21 was rocking a set of Rotiform BMIs



The first Players show of the year once again took over Goodwood's historic racing circuit and the turnout and cars on show were stunning as always.

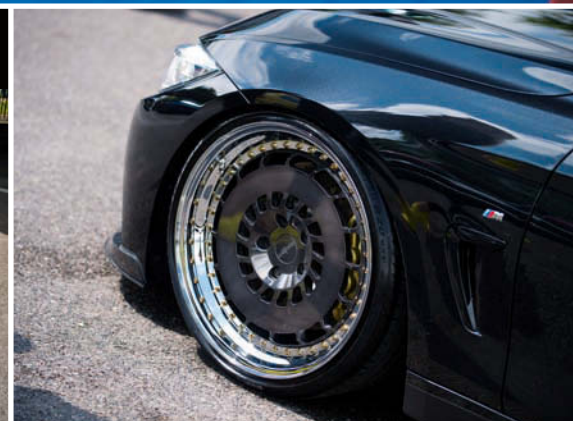
Words: Elizabeth de Latour
Photos: Ade Brannan

You can always expect the great and the good to make an appearance at the Players shows and this year's Classic saw some of the scene's finest modified machinery on display. The grey and cold start didn't put the crowds off (showgoers were rewarded with blistering sunshine later in the day) as the turnout was pretty spectacular. The Airlift Showcase was rammed, while the best of the best scattered across the paddock and infield areas. There were even attendees from as far as Europe who had made the trip to show their cars on our shores.

The BMW contingent was seriously impressive on the day with a wide variety cars to please pretty much everyone, whatever your BMW preferences may be, and numerous ex-PBMW feature cars, along with some upcoming ones, were also in attendance. Along with the static display, there were plenty of people enjoying the circuit, with the very reasonably priced track pass enticing plenty of owners to stretch their cars' legs while a fine selection of trade stands selling T-shirts, stickers and various other bits and pieces were also about and, if you were feeling flush, you could even get a flight in a Spitfire. We weren't and didn't... shame.

Players Classic is one of the most popular UK shows and if you've never been, it's most definitely worth the trip down to Goodwood – on a sunny Saturday there are few better ways to while away the day. We'll catch you next year... ●





Below: JD Wraps' wide-body E36 on Rotiform LHRs
Left: Classic Gottis on this E36 Cab





Above: Clive King's supercharged wide-body E30, full feature soon!
Below: Same goes for Tom Lilico's awesome Z3; Matt Clifford's 840

Above: PBMW regular Kevve brought his E30 over from Belgium;
Below: Nick Sahota's orange beast; Ben Anson's tasty bagged E21



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EVENTURI INTAKE

Words: Sam Ratcliffe

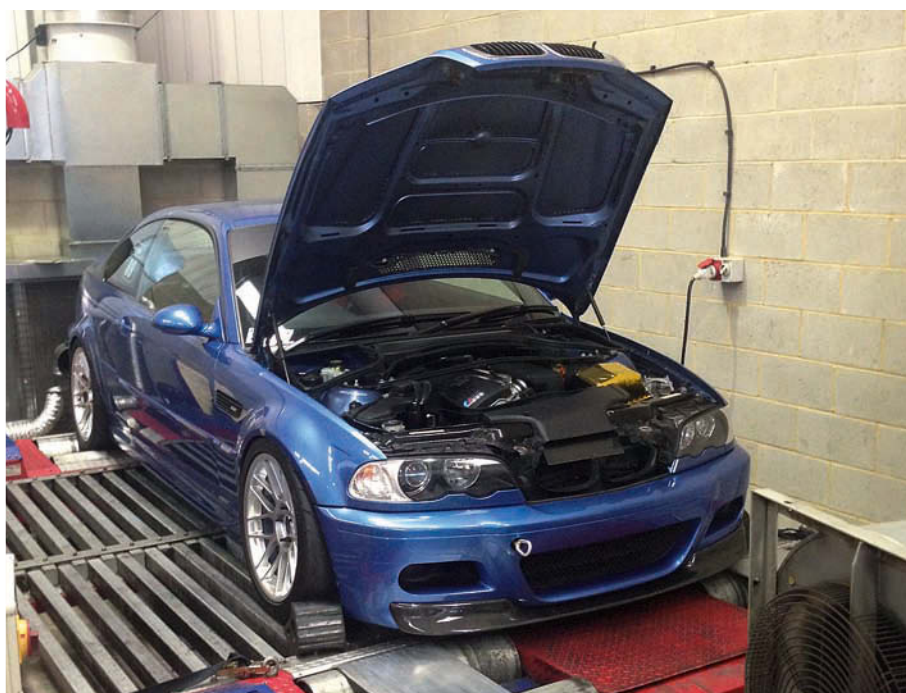
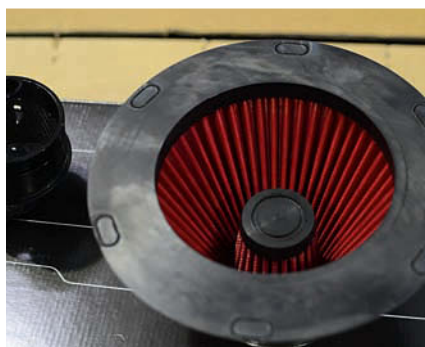
Photos: Sam Ratcliffe and Eventuri



THE ISSUE

With most aftermarket air filters you've often got the problem of big filter, small MAF housing. Your typical bolt-on cone filter with a few heat shields can suck in more air but has no way of consistently throwing that air into the throttle body or bodies to see any solid gains; all you'll be getting is a different grumble from your regular soundtrack. In addition to that, many aftermarket filters use metal mesh oiled filters that, over time, drag the oil through and this then sticks to the MAF thus giving false readings and, in the long run, potentially ruining your MAF.





Eventuri looks good, is easy to fit and makes real gains: over 10hp with a 5°C reduction in intake temps, which transforms how the car performs on the road

EVENTURI'S SOLUTION

Eventuri has cracked this problem with its all-new carbon intake which is like no other on the market. Put simply, the unique external carbon fibre shape is its own heat shield and it goes from big to small; in essence it takes the incoming air from the wide open bonnet and smoothly carries it down to the diameter of the MAF housing and accelerates it through, retaining all of the air that's gone through the filter.

After the success of the S85 intake, interest grew for other models, starting with the ever popular E46 M3. A mock-up was made and feelers put out on the forums which resulted in a pre-order list that grew rapidly. Some people were desperate for the intake even before all the development work was completed to optimise the performance and reliability, but good things come to those who wait!

The external casing of the filter itself is a pre-preg carbon fibre weave, made from 2mm thick carbon. That doesn't sound like a lot, but in the terms of carbon that is more

than enough to give a ridged casing for the filter and to keep the heat out.

As this carbon piece is so eye-catching it is quite easy to overlook the intake's other impressive features. For example, the MAF housing is machined from aluminium with an inbuilt factory-styled rubber gasket to ensure perfect fitment into the elbow intake hose. The area where the air mass sensor bolts into the housing is made from engineering plastic to help keep the intake air temperatures down, which is important to keep the figures strong and consistent. In addition to that, the Eventuri uses a high-flowing, dry air filter which means your MAF is safe.

The heat shield is made up of three separate pieces which also have a clever design: unlike other air filters, these heat shields are made just to keep the heat away from the filter rather than being an attempt to create a bigger air box in the engine bay. Each shield is made from aluminium with a neoprene lining: the first is bolted to the

assembly itself; the second bolts down on the chassis leg using the factory air box fixings, which keeps heat from the engine block away; and the last shield clips back onto the first, shielding the heat from the radiator. It sounds simple but a lot of testing went into the shape of these plates to keep temperatures in this area down.

Last but not least is the lower scoop, which is also a work of art. The E46 has two factory intakes, one from the bonnet kidney grilles and the other from the nearside brake duct. After some testing, Eventuri knew it was pointless to improve on the centre intake and all the good gains could be achieved from redesigning the lower brake duct feed. Even the scoop, much like the intake, is made from 100% pre-preg carbon with a CNC'd collar. This scoop clips firmly into place covering half the brake duct while still allowing air to reach the brakes. The scoop directs a lot of ambient air directly into the filter's mouth and, as it has nothing hot to pass, that air is



always cool making the power gains solid. This scoop is also a stand-alone part so it can be used with any CSL-style air box or even the stock air box to help with increasing the airflow and bringing intake air temperatures down faster.

Installation of the Eventuri is very straightforward; other than unscrewing the MAF the whole kit can be fitted using the factory tool kit. No remapping of the ECU is required with this filter, so it is simply a case of bolting it on and away you go...

I was lucky enough pick up my filter from their HQ so we took this opportunity to

dyno the car before and after whilst keeping an eye on the stats in the background.

Before this, I had gone to town on my stock air box with some gold heat reflective tape in a vague attempt to keep the intake air temperatures down as the E46 suffers with high readings giving inconsistent power.

We ran my car on the dyno with the factory intake reaching a figure of 329.6hp with a 25°C intake air temperature. One thing to bear in mind is that my car runs R compound track day tyres which always give a lower reading on a dyno but the purpose of today's runs was to see what sort



of power gains the Eventuri could give.

My filter was fitted there and then so back-to-back runs could be done, keeping to the same conditions so we could be sure of any improvements. With the Eventuri installed it was back on the dyno where my M3 now made 340.1hp with an intake air temperature of 20°C. The gold heat wrap tape I'd used is no cheap measure, so to get a 5°C reduction in intake air temperatures from the Eventuri shows just how good this kit really is. Keeping these temperatures low keeps your management happy, your engine running smoothly and your power strong.

ON THE ROAD

Now to the fun part: the way it feels on the road. Straight away, even just pulling away and calmly going up through the gears, it was apparent that there was a difference. The throttle response was the first thing I noticed. The only way I can describe it is that it's like being in a stock M3 with Sport mode on. As we were still driving through a built up area we weren't really able to put the hammer down yet, although going from roundabout to roundabout really opened my eyes to how much of a torque increase I had. On paper the increase may not have appeared massive but on the road it was an

unreal transformation and from lower down the rev range, too.

Once the roads opened up and the traffic cleared the taps could be fully opened. The first thing I noticed was the noise. The Eventuri may be a baby compared to a full-on CSL-styled air box but this thing is loud. After I stopped biting my lip at the noise I embraced the overall power. These kits see a 10-15hp increase on a rolling road but it feels like so much more on the road, and the engine pulls smoothly and feels stronger all the way up to the redline.

It just so happens that the day after

getting my filter I went to Sliverstone with my M3 twin, Grant Ross, for a track day. It was the perfect opportunity to throw all I've got at the Eventuri intake. Performance all day was sublime and I even found myself leaving it in a higher gear than I usually do as I was still getting more than enough drive out of the corners. With the power curve being so smooth and predictable I could feed in the power out of the slower corners and before I knew it I was onto full throttle and away. From a daily driver to a track spec car this is a great piece of kit that you will not be disappointed with.



APPLICATIONS AND PRICE

E46 M3: £675
Z4 M: £600
E60 M5: £1020
F8x M3/M4: £1650
F10/F13 M5/M6: £1350

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ELIZABETH'S E39 540i

Brakes are kind of a big deal when it comes to cars and as far as I'm concerned there's no such thing as having too much braking power. You can have too much power (no, really) but you can't really over-brake a car, as such. You can definitely have over-servo'd brakes but nothing bad ever came of fitting big brakes to a small car; it just means you can stop much more quickly, progressively and safely and when you want to stop as fast as possible, you need a big brake kit. Obviously, the most important aspect is that they can stop your car with maximum efficiency but if they look good then that's most definitely a welcome bonus. It's funny that a number of manufacturers, including BMW, have been fitting their high performance models with some very big brakes but haven't quite mastered making them look nice. It might sound silly but if you've got wheels with widely-spaced spokes that people are likely to be peering through then ugly open calipers are just, well, ugly. Even most Bentleys don't have nice calipers, just vast open ones that have been painted and had a Bentley logo stuck on them. Bizarre.

Obviously a BBK is a significant investment but it is most definitely a wholly justifiable purchase. I've had them before and if you've ever experienced the kind of stopping power they deliver, you know they are well worth the outlay. When I mentioned that I was fitting a BBK to the E39, a couple of people commented that it was overkill and one guy in the office sarcastically asked if it was a racing car. No, it's

not, but consider this: an E82 135i has big, six-pot-equipped front brakes fitted as standard. It weighs around 1500kg and has 306hp whereas my 540i weighs over 1700kg and has 286hp. Yes, in absolute terms, the 135i is a faster car but, realistically, out on the road it's reasonable to state that both cars will be capable of travelling at the same sort of speed, and likely to be doing so, and when it comes to stopping the smaller, lighter 135i with the much bigger brakes will do so much more quickly. In the rear world, the 540i will benefit from a BBK just as much as smaller, lighter, faster car. Plus they look cool and as I'm going all-out on this project a BBK would definitely be a nice addition.

There are a lot of BBK companies around these days, of varying reputation, but one company has really made a name for itself in a relatively short space of time, and that's StopTech. This American firm was established in 1999 and set out to become the leading aftermarket manufacturer and supplier of high performance brake components and systems, and over the past 16 years it's established itself on the modifying scene by developing and producing products that really deliver. Usefully, it also caters for a wide range of BMWs including the E39, so I got in touch with CA Automotive, the official StopTech dealer for BMW in the UK, to discuss getting my hands on a kit.

There's a choice of four- or six-pot caliper front kits available, both running the same size 355x32mm discs but as I'm a firm believer in doing things right, it wasn't a choice as far as I



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was concerned: it just had to be the big big brake it for me. The next step was deciding on caliper colour. StopTech offers a choice of six hues and I was quick to discount red, blue, gold and yellow as I didn't feel any of those would suit the colour of the 540i. I know that's not generally a concern when you're buying a car that comes with big brakes from the factory but when offered a choice, you want to get it right and go with what you like. That left black and silver. While I didn't want anything too in-your-face, black was a bit too subtle for my taste and that left silver, which suited me just fine.

So, what do you get for your £2406.25? Well, you get fully forged six-pot calipers that are both light and stiff, offering a firmer brake feel, with a carefully engineered two-piece design that reduces flex, further aided by a patented, removable centre bridge. Carbon steel bolts run through both halves of the caliper, multiplying strength threefold according to StopTech. The mounting brackets use studs rather than bolts, for increased strength and durability and are fully machined. The two-piece grooved AeroRotors (that's discs) use patented, curved 'AeroVaness' that push more air through the disc, with a curved design and an air channel that widens at the trailing edge of the vanes. They are mounted using patented, hard-anodised billet 7075 aluminium AeroHats for improved airflow, between 50-100% over traditional two-piece designs according to StopTech, and the whole lot is topped off with a

set of braided steel brake hoses.

When the kit arrived from the States I was eager to crack open the boxes and probably spent slightly too long drooling over the massive gorgeous calipers and equally vast two-piece discs but they weren't doing much good sat in their boxes so I got on the phone to Autoenhance over in Romford, Essex, to book the E39 in for a fitting session. The day when I was booked in started badly with horrific traffic on the way to the company's HQ, which put Mehmet, my technician for the day, a good few hours behind schedule (sorry!) but he was an absolute star and stayed well past closing time to get the job done and ensure everything was right with the car and I was happy. As you might expect from a company like Autoenhance, fitting a BBK is no big deal for these guys and it all went without a hitch. Mehmet whipped off the old brakes and let me compare them side-by-side with the StopTech kit. The new discs are 31mm larger than the standard ones

but the biggest difference is in the calipers, with the six-pots dwarfing the sorry-looking standard single pistons items. Once I'd finished gawping, Mehmet set about fitting the shiny new brakes and once he was happy with everything he took the 540i out for a quick road test to make sure all was well. Upon his return he informed me that the brakes felt great and sent me on my way. That's where we'll leave it for this month as I'll save the bedding-in process and actual driving (or rather braking) experience for next month...



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SAM'S E46 M3

Those upgrades that are completely unseen are sometimes the best and this month has been full of them. First up, even though I already have an AKG motorsport shifter it still has a bit of slack that I wanted to address. It's because I was still running a factory selector rod, so I went in search of a double sheer selector rod (DSSR for short). After a bit of looking around the UUC item stood out above the rest. Its site has lots of little demos showing the benefits, so to me it was a no-brainer.

There is also one other item that can tighten up the gear shifter, one that is very often overlooked. At the end of the gearbox, on the selector arm, is a knuckle that then goes to the selector rod. In that knuckle there is a hard foam pad that wears. Luckily the part is only pennies from the dealers; unluckily for me, it's a pig to fit.

The second piece of hardware collected was a

Vibra-Technics transmission mount. For the past year-and-a-half I'd been running Vibra-Technics' prototype mount, which had stood up to the test of time well. However, now they're in production the mounts are even bigger, better, stronger and offer more exhaust clearance, so I just had to have one.

Of course, it made sense to fit these parts at the same time although once I'd got the transmission mount and factory selector arm off it became apparent that my hands are far too big to remove the knuckle with the propshaft in place. I then noticed that my giubo had a few cracks/splits in it, so it was pointless in removing and refitting this item. For the time being I've just fitted the DSSR and new trans mount and have left the foam pad aside to start a new collection of parts.

The new DSSR stiffened up the gear throw a little but having a wiggle around under the car I

can tell the foam pad is going to take a lot of play out; after all it has covered over 110k so I guess it was to be expected. It's funny to think that even with all these expensive motorsport parts the fix to a sloppy shift is an inexpensive piece of foam.

The last unseen new part on the list was fitting front track pads to my WP Pro brakes. I didn't have a track day for a few weeks but wanted to make sure they were bedded in beforehand. The new track pads have a stronger bite and can withstand more heat. The only down side is that they create more brake dust but I'd take that over a trip to the gravel trap any day.

After discovering the worn-out giubo I decided to give the propshaft an overhaul so I got onto Hack Engineering who sourced me a new giubo, centre bearing and a paper gasket for keeping the grease in at the diff end.



THORNEY MOTORSPORT'S F82 M4

We are not blessed with good roads in the UK. In fact, a lot of our roads would not go amiss in a World Rally stage. So it is not surprising when car manufacturers struggle to come up with a decent setup for sporty cars so they can be fun when it's smooth *and* when it's rough. Generally it's a compromise one way or the other – soft and compliant but poor handling or rock hard and uncomfortable but with good control. Sadly on the M4 BMW has elected for the soft route, which is not much good for anyone who wants the car for more aggressive driving.

When in its softest setting 'Comfort' the ride is relatively compliant and for a sports-type car it's pretty good, copes well with the bumps and controls the overall ride nicely. But if you want to push on the car generates a lot of roll in the corners and also quite a lot pitch under braking and acceleration, so owners quickly move the damper setting to 'Sport'. This sport setting is better for body control but grip under acceleration quickly suffers and pretty soon you see the traction control light up like a Christmas tree. Try the 'Sport+' setting and it gets worse again with better body control but even less grip. Try all this in the wet and you get hacked off pretty quickly.

The issue is that BMW has compromised on the spring weight to create body control; it's used a softer spring than it'd like to get the ride soft enough and then used the variable damping to stiffen things up for more spirited driving. In theory it makes sense: i.e. have a soft setup for the spring (not an easy thing to change on the fly) and then use electronic damping to give owners the option to stiffen it up when they want to have a play. However the down side is that by stiffening up the damping you reduce grip which, combined with forced induction and a rear-wheel drive chassis, compromises the handling even further.

For any M4 owners reading this, try it out: drive down a favourite road in 'Comfort' setting and see how the power gets down to the road on exiting corners. Then try it in 'Sport' and 'Sport+' modes. It's noticeably worse in the sportier settings; however do the same test on entry to corners (where body roll is the issue) and you end up with a system that wants 'Sport+' going into a corner and 'Comfort' on exit (and no, I don't suggest you change the setting mid-corner!). The bottom line is the springs are too soft and the damping is having to do the job of grip and body control and it can't cope.

The good news in all this is that it's a cheap and simple fix: the dampers are high quality so don't need changing (unless on track but that's another issue). The problem is the springs. Change them and you can fix this for a few hundred pounds. By fitting a stiffer spring you take the pressure off the dampers having to do two jobs: the stiffer spring controls the body movement allowing the damper to just concentrate on grip and less on body roll. It means on bumpy roads you can run the softer setting to maximise grip and still have the extra body control that a sportier driver wants. Add to

this a lower ride height to lower the centre of gravity (and remove that comedy wheel arch gap the stock M4 has) and it's a win/win deal.

We tested several sets of springs from Eibach and H&R and the winner is the 40mm drop H&R kit, the biggest drop of any of the kits. The lower ride height dramatically helps the fore/aft pitch in braking and acceleration and controls the corner entry body roll. There are no issues with body rubbing or clearance either. The really big difference is how you use the dampers. My M mode settings used to be high power and 'Sport+' dampers; it's now high power and 'Sport'. I've gone down a setting on the dampers to increase the grip. When it's wet I drop that to 'Comfort' (keeping high power). The car is still a bit of a handful getting the power down but it's dramatically better than stock. Less roll into and out of the turn means more of the tyre is in contact with the road, which equals grip. Obviously when fitting a set of springs you need to make sure the geometry is checked and we enhance this with changes to camber and toe. However the M4 is limited in this regard. We

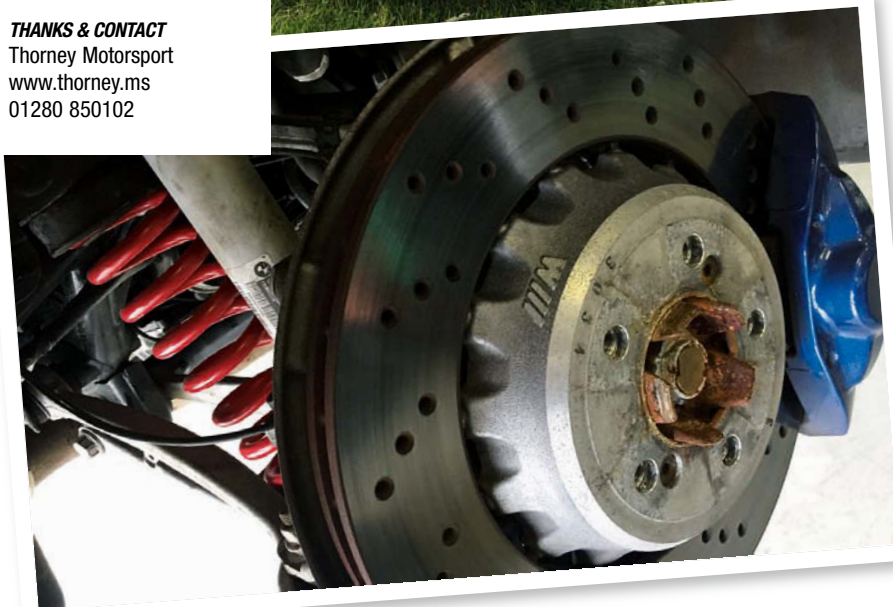
can't make dramatic changes without changing other parts. It can be improved though.

As well as changing the springs we experimented with spacers to give the car a wider track. On the E46 M3 we went for a wider front to rear setup which helped reduce understeer in that car but the M4 with its spirited rear grip we experimented with the opposite: a wider rear percentage to the front. After a few changes on sizes we settled on a 15mm spacer on the rear and a 12mm spacer on the front. This widens the track but it's proportionately wider on the rear to settle down some of the grip issues. Combined with the change in springs the car feels a lot more able to handle the aggressive power delivery.

The drive now is great fun with a lot more grip coming out of turns and more control on body roll and turn-in. The steering is still a little vague compared to a CSL but it's a lot more connected than before. I'm really starting to like the car more and more. So, no need to blow a king's ransom on new dampers; a simple spring change can make a dramatic difference to the M4. Try it.



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OUR CARS



ADAM'S E36 COMPACT

So it appears I've been very quiet for a few months now but that doesn't mean work hasn't been happening behind the scenes; it most certainly has. Things have taken a bit longer than planned sadly, mainly due to having to transport parts from the car to the workshop, to my work place and to my welder but the rear suspension is very nearly there!

The reinforced trailing arms had to be slightly modified since my last update to allow the driveshafts to fit into the hub, although this is still a very close fit and once installed may still have issues. Time will tell once the rear end is refitted to the car. The trailing arms have had new RevShift bushes fitted (this is the same American company I used for the rest of the bushes required for the rear end) as well as new OEM quality bearings, discs and handbrake cables combined with new braided brake hoses. I then stripped the arms back and started repainting them. It was a slow and tedious process but this will avoid them rusting away in the future. I've now seen two sets of these trailing arms and once you start digging at the rust, it's worrying how deep it goes under the 'rubbery' factory

paint! I also ordered some 90mm studs to fit to the trailing arms, in an attempt to make changing wheels a much smoother process – something any BMW owner would appreciate and understand! These had Loctite added when fitting to avoid any dramas – like the wheels falling off!

In the meantime the beam had laser cut camber/caster adjustment tabs welded on, which also took some fettling, mainly because I want to be able to achieve nearly neutral camber on the rear but avoid fowling on the underbody of the car. Frustratingly the car is on a bank at the moment and although I did test fit the rear end to check I had enough adjustment, the car was so lopsided I couldn't accurately measure the camber, so let's hope it's enough! The beam was returned from the welder this week and I've now fitted the matching RevShift bushes and have now started painting – the last piece of the puzzle!

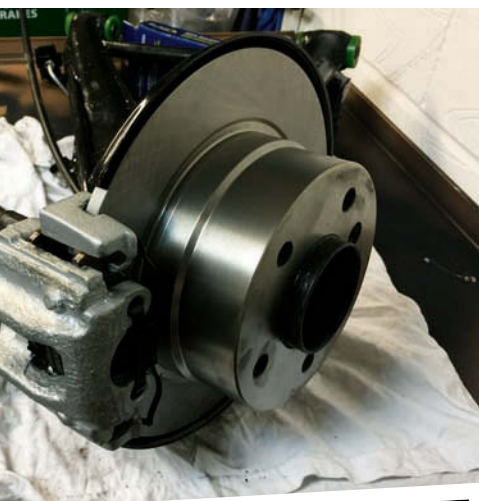
Now, over time I've gathered various rear anti-roll bars. I laid them out next to one another to compare. I had a 318Ti ARB, 318Ti Sport and a 325i E30 rear anti-roll bar and although I was under the impression the E30 ARB was the

biggest factory-fitted roll bar, it turns out the 16mm ARB fitted to the 318Ti Sport was the thickest of them all, so I've now swapped to using this, with SuperPro polybushes.

In between waiting for parts to arrive and waiting for paint to dry (literally!), I've been stripping the sound deadening out of the car for several reasons – obviously weight being one of them. To people who say this stuff doesn't weigh anything, I can tell you, it certainly does! And due to not having a carpet fitted, when the pedals start getting used and abused the sound deadening starts melting, so I wanted to have a cleaner cockpit – although I'll also be running aluminium chequer plate in the footwells to finish things off. I'm part way through the painting process of the interior, although because the dash isn't out this time round, I'm having to paint it section by section.

I'm hoping to have the rear suspension refitted within the next week and in the meantime I'm off to go bucket seat hunting! I'm aiming to have the car finished for September, just in time for a drift event I want to attend although I've got a long way to go yet!





ROB'S E30 318i

After some very sparse months it's been all go in project E30 land. I have a deadline set for the weekend of the Silverstone Classic at the end of July in which myself and the E30 will take part in the Retro Run – a 100-mile shakedown and a non-competitive debut for the E30 in its new lightweight hillclimb and sprint guise before my first sprint in a few months. As my previous deadline for getting the car on the road of May has been well and truly missed I'm very keen to get it back on the road, use it and race it.

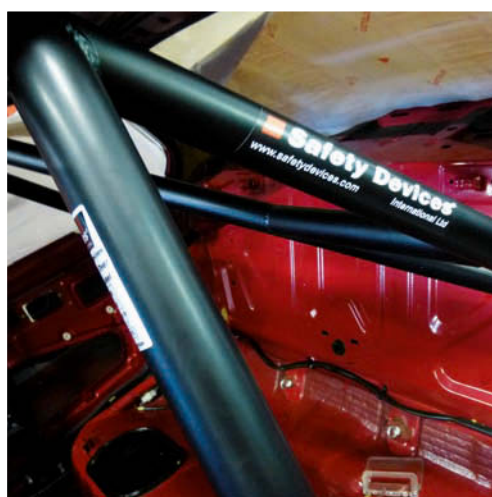
As you can see from the photos my roll-cage has arrived and, thanks to a mate with time on his hands, has been mocked up inside the car ready for the mounts to be welded in by someone far better qualified at welding than me. One small issue is that the roll-cage blocks the operation of the switch for the sidelights and dipped beams which, as any of you that have driven an E30 will know, pulls out so some relocation will have to happen.

I have sent off my spare struts to Gaz Shocks

to be converted into coilovers. They should be with me just before the aforementioned Silverstone deadline and give the car a much needed altitude adjustment since its weight loss.

A couple more items have been purchased for the old girl: a set of OMP seat mounts have been made for the E30, so they bolt straight in and now I can mount a new fiberglass framed Sparco race seat, which is on order, in an MoT- and scrutineer-friendly manner. Also purchased is an oil catch can from Viper Performance. It's a very reasonably priced piece of kit, if a little too shiny for my taste so a lick of paint will probably be applied before I fit it into the engine bay.

If all goes well, by the time you read this the E30 should be back on the road and ready to compete. As with any on-going project it will be far from finished and plans to work on the lack of power and further lightening are in place, so there are still plenty of updates to come in the following months. Stay tuned guys and gals.



OUR CARS



STEVEN'S E31 850Ci

Last month I said that I was going to be taking Hiro for an MoT. To cut a long story short, she failed. I walked back to the test centre only to be greeted by the sight of my car still up on the ramps – never a good sign! Gutted. I was so looking forward to cruising around for a few days before I commence the next stage of the rebuild (bodywork) but it wasn't to be.

To be exact, she needed some welding done on the rusted OSR jacking point, the front brake balance bias is out of whack (I knew I should have changed the pads!), the handbrake is non-existent but most worrying was the emissions. It was five times the legal limit!

Starting with the brakes, I changed out the front brake pads for some Pagid items which I bought for a bargain price, and cleaned up the rust from the handbrake. After several sharp brake tests to bed in the pads, I think I have cured the imbalance (and the pesky ABS light on the dash has gone out – woohoo!). After that it was down to the welders to have my jacking point rebuilt.

As for the emissions, however, that's a different story. She has sat unused for about three years and I was hoping that some injector cleaner and a damn good blast (on my way to the MoT test centre, obviously) would clean out the cobwebs and get the cats up to temperature, but it wasn't to be. The readings were still double what they need to be, which is an improvement, but still worryingly high! There's a strong smell of fuel, too. Since the air filter and spark plugs are only about four months old and the lambda sensors were reading normally, I was at the end of my expertise in how to fix it, so I decided it was time to consult an expert.

The first garage I spoke to were very willing to have a look until I told him it was a BMW 850, at which point he laughed at me and told me to consult a specialist. As a result, it went to the local BMW indy K&M Autotechniks for a check up, who diagnosed dodgy cats.

Hiro has a Powerflow exhaust fitted by a previous owner, and so I figured the best solution was to replace the cats with new Powerflow items, a decision reinforced by the fact that BMW quotes the cats at £1300 each, and I need two! My closest Powerflow dealer was Enigma in Slough, which is run by a guy called Naz, and is also conveniently only five miles from my house. When they removed the old cats, they were found to be empty. That's right, empty, which



throws into question the previous owner's MoTs as being a 1993 model cats are a requirement to pass the emissions test. Anyway, Naz installed some new shiny ones and took it for an MoT and it has now passed (just)! Legend.

However, there was still a strong smell of fuel whilst driving. Again, the guys at K&M came up trumps by finding a snapped fuel return pipe just below the driver's side door. I was able to repair this very easily with some spare fuel hose I had lying about, and all this means I can at last drive the damn thing! Which of course means I can test out the new suspension and brakes installed.

The Bilstein B12 kit came highly recommended, and I can see why. The handling is much sharper than I expected, giving great feedback when pushing on yet remains soft enough to waft along with the windows down in comfort. It genuinely offers the best of both worlds and I really can't speak highly enough of it. The brakes are also a massive improvement; the resealed calipers, along with the braided lines and fresh fluid have given a really firm pedal which really inspires confidence. Oh, did I mention the ABS light has come back on? Damn car...



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ROB JOHNSTON E64 650i

We don't see many E63 or E64 Sixes in these pages so not only is it nice to be able to include one, the fact that it looks so good is also a welcome bonus. Rob bought the car, a personal showroom car from Cardiff Sytner, three years ago and has loved every minute with his V8 drop-top. Initially he started out just replacing and renewing worn parts before being led down the modifying path and the bug has most definitely bitten. Under the bonnet there's a K&N filter, Stage 2 remap, pulleys and full engine tune by AmD along with RPi Scoops, a Sprint Booster and a full custom exhaust from AmD to really get that V8 singing. The big Six has also been lowered on BC coilovers over a set of 20" 3SDM 0.01 wheels and treated to MTec drilled and grooved front and rear discs with RedStuff pads and uprated Eibach anti-roll bars. Rob is planning on fitting a few carbon styling elements with his final goal being the addition of a supercharger – we cannot wait to see this car finished!



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JAMIE ROBERTS E46 330Ci CAB

Incredibly this is Jamie's 19th E46, which must surely be some sort of record? This is a recent purchase, replacing, well, another E46 obviously, the previous example being a Coupé on E90 Ellipsoid wheels – the Convertible carries on with the black-on-black theme of the last car and while he's not done much to it yet, with a car as good looking as the E46, especially in Sport guise, you don't need to throw many mods at it to really bring out the best. To that effect it has been lowered over coilovers, had some adjustable camber arms fitted and Jamie has also added a set of Cast13 RB2 wheels, which look fantastic and sit perfectly, especially with that drop. Judging by his previous effort and what he's done so far, this is going to be great when he's done.



JAMES COCHLIN E92 335i

The 335i offers a lot of performance for not a lot of money, with plenty of scope for more power and James certainly hasn't been shy with the performance mods on his E92. There's a JB4 piggyback tune, BMS dual cone intakes, BMS 3" cat-less downpipes and a Forge chargepipe with twin dump valves, which should mean over 400hp.

Not that you'd know to look at it from the outside, though, seeing as it's standard bar a mild drop thanks to a Bilstein B12 suspension kit and a few trims changes, making for a bit of a sleeper. Next on James' list of upgrades are a set of brakes, an LSD, wheels and some interior changes. It sounds like this one's a keeper!



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